Los Angeles County Metropolitan Transportation Authority One Gateway Plaza 3rd Floor Board Room Los Angeles, CA



**Board Report** 

File #: 2020-0767, File Type: Agreement

Agenda Number: 13.

#### PLANNING AND PROGRAMMING COMMITTEE FEBRUARY 17, 2021

SUBJECT: 1<sup>ST</sup> & SOTO JOINT DEVELOPMENT

## ACTION: APPROVE RECOMMENDATIONS

#### RECOMMENDATION

#### CONSIDER:

- A. AUTHORIZING the Chief Executive Officer ("CEO") to execute a Joint Development Agreement ("JDA"), ground lease and other development-related documents (collectively, the "Development Documents") with a joint venture between Bridge Housing Corporation - Southern California and East LA Community Corporation (collectively, the "Developer") or an affiliate of the Developer, for the construction and operation of a mixed-use affordable housing project (the "Project") on a portion of the Metro-owned property at and adjacent to the Metro L Line (Gold) Soto station in Boyle Heights (the "Site"), all in accordance with the Summary of Key Terms and Conditions ("Term Sheet") attached hereto as Attachment A;
- B. AUTHORIZING an exception to the Joint Development Policy, to allow for a \$3,117,000 (approximately 72%) discount to the \$4,317,000 fair market capitalized rent for the Site under the ground lease, which is above the current policy limit of 30%;
- C. CONSIDERING, pursuant to Public Resources Code Section 21155.2, the environmental effects of the Project as shown in the Sustainable Communities Environmental Assessment prepared for the Project (City of Los Angeles, Department of City Planning, Case No. ENV-2019-2314-SCEA) attached hereto as Attachment B;
- D. ADOPTING the additional measures regarding archaeological and paleontological resources set forth on Attachment C;
- E. FINDING that the Project is a transit-priority project that meets all the requirements of Public Resources Code Section 21155.1(a), (b) and (c)(1) and is declared to be a sustainable communities project that is exempt from the California Environmental Quality Act ("CEQA"); and
- F. AUTHORIZING Metro staff to file with the County Clerk and the State Clearinghouse a Notice of Exemption for the Project consistent with Recommendation E.

# <u>ISSUE</u>

Metro and the Developer are parties to an Exclusive Negotiation Agreement and Planning Document (the "ENA") for (a) the development of the Project on the Site and (b) the restoration of a Victorian home on Metro-owned property situated across from the Site on Soto Street. In December 2020, the Board authorized the execution of an amendment to the ENA to extend its term through December 30, 2021. The ENA has allowed staff and the Developer to explore the feasibility of the Project, conduct Developer-led community outreach, obtain Project entitlements and CEQA clearance from the City of Los Angeles, and negotiate the key terms and conditions of the Project's JDA and ground lease.

The Project is now poised to move to the next steps of the development process: (1) execution of the JDA; and (2) execution of the ground lease (and other Development Documents, such as Project-related dedications and entitlement and funding-related covenants) after conditions for execution have been met to the Developer's and staff's satisfaction. Staff is seeking authorization to execute these documents in accordance with the Term Sheet (Attachment A).

# DISCUSSION

# Site and Project Overview

The Site is an approximately 0.67-acre portion of the approximately 1.08 acres of Metro-owned property situated on the southwest corner of 1<sup>st</sup> and Soto Streets. The Site lies just south of the Metro L Line (Gold) Soto station and includes a portion of the existing station plaza and landscaping.

The Project will frame the station plaza to the south, forming its southerly edge, and will include 61 to 63 affordable apartments (final unit count will depend on the ultimate cost of and funding for the Project), one unrestricted manager's apartment, approximately 2,440 square feet of ground floor commercial space, a community room that opens onto the station plaza, and related parking. The Developer will target community serving uses and/or local small businesses for the Project's commercial space. Project entitlements and CEQA clearance were obtained from the City of Los Angeles in June 2020 and the design of the Project is approximately 75% complete. Project renderings and a site plan are included in Attachment D.

Much of the Project's needed funding and financial support has been secured, including a \$10 million award of State Transit-Oriented Development ("TOD") Housing Program funds that was received in December 2020. However, an allocation of 9% low income housing tax credits and an award of Section 8 Project Based Vouchers to support the operation of the Project's twenty permanent supportive housing units is still needed. The Developer plans to apply for tax credits in the State's first funding round in 2021. The application deadline is anticipated in March and the application requires submittal of an executed JDA. As such, approval of the recommended actions is time sensitive. The Project is included in the City of Los Angeles Housing and Community Investment Department's Affordable Housing Managed Pipeline. Inclusion in the pipeline typically ensures a tax credit award, which is anticipated in the second quarter of 2021. Project Based Vouchers will also be applied for in early 2021 and are anticipated in the third quarter of 2021. The Developer has applied for one additional funding source from the Los Angeles County Development Authority and

anticipates a determination regarding an award in the first quarter of 2021.

# Affordable Housing

Metro's Joint Development Policy seeks to facilitate construction of affordable housing units on Metro -owned property such that 35% of the total housing units in the Metro Joint Development portfolio are affordable for residents earning 60% or less of Area Median Income ("AMI"). The Project will support this goal as all but one of its apartments (the unrestricted manager's unit) will be restricted to households with earnings at or below this threshold during the initial 57-year term of the ground lease. Specifically, twenty of the Project's apartments (the "PSH Apartments") will be restricted as permanent supportive housing for occupancy by formerly homeless households earning up to 30% of AMI and the remaining 41 to 43 affordable apartments will be restricted for occupancy by households earning between 30% and 60% of AMI. The Project's income restrictions were recently expanded to serve a greater range of households and support Project viability. Notwithstanding the forgoing, the ground lease will provide the Developer with the option to lease any of the Project's twenty PSH Apartments to non-permanent supportive housing households earning up to 60% of AMI if, during the ground lease's 57-year initial term, the Project's proposed Project Based Voucher funding (or a similar operating subsidy) is reduced or lost and during the time of such reduction or loss a PSH Apartment becomes available for lease.

The ground lease will provide the Developer with an option to extend the term an additional 42-years during which all affordable apartments in the Project will be restricted to households earning no more than 80% of AMI. The option period length and increased income restriction limits were reviewed by Metro's financial consultant and were deemed reasonable and are needed for the Developer to secure a tax credit investor and obtain tax credit equity for the Project.

## Developer

The Project's Developer is a joint venture between Bridge Housing Corporation - Southern California ("BRIDGE") and East LA Community Corporation ("ELACC"). Each of these entities is a missiondriven, non-profit affordable housing developer with considerable experience developing, financing, constructing and operating mixed-use affordable housing developments such as the Project. BRIDGE was founded in 1983 and since that time has participated in the development of over 18,000 affordable housing units throughout the west coast. BRIDGE currently owns and manages 12,300 affordable apartments at 106 properties. ELACC was established in 1995 and has developed or rehabilitated over 600 units of affordable housing in Los Angeles County, which it now manages. In addition, ELACC is an active leader and advocate for community-driven economic development, financial empowerment and social justice for individuals and families with low and moderate incomes in the communities of Boyle Heights and East Los Angeles.

## Restoration of the Victorian Home

The recommended actions do not affect the proposed restoration of the Victorian home currently stored on Metro-owned property located across from the Site on Soto Street. The exploration of this restoration for community-serving uses will continue as a second phase of development under the existing ENA.

# Outreach

The Developer has engaged with the community to inform the scope and design of the Project. They conducted a robust outreach effort that has included eight community meetings/workshops, five separate focus group meetings (including meetings with tenants, property owners and small businesses) and meetings with over ten community organizations. In addition, the Developer has engaged with the Boyle Heights Neighborhood Council ("BHNC") three times and their Planning and Land Use Committee ("BHNC PLUC") four times. Staff and the Developer have also engaged with the Metro-established Boyle Heights Joint Development Design Review Advisory Committee ("DRAC") where additional Project-related input was collected. The most recent community engagement occurred in December 2020, when Project updates were provided to the DRAC and the BHNC PLUC.

## Key JDA and Ground Lease Provisions

The Term Sheet (Attachment A) provides the summary of key terms and conditions for the JDA and ground lease. The terms of the JDA are focused on the Developer bringing the Project through full financing and construction readiness. The JDA will:

- Provide Metro with a Holding Rent of \$2,500/month during the JDA term, which will be applied to the capitalized rent due under the ground lease, once the ground lease is executed;
- Provide Metro with certain design review and approval rights as the Project progresses to completion;
- Recover certain Metro transaction-related and other support costs, including the cost of inhouse staff time (except for Transit Oriented Communities department staff time) and fees/costs related to consultants and other third parties (except for in-house and outside legal counsel fees/costs with respect to negotiation and preparation of the JDA, ground lease and other Development Documents); and
- Set forth certain conditions for execution of the ground lease and other Development Documents.

The ground lease will be executed once the conditions for ground lease execution have been met to the Developer's and staff's satisfaction. Key terms of the ground lease are as set forth in the Term Sheet and include:

- An initial term of 57 years, with an option to extend the term an additional 42 years;
- Metro's receipt of a one-time capitalized rent payment of \$1,200,000 for the initial 57-year term, to be paid at execution of the ground lease;
- Metro's receipt of additional rent for the 42-year option period in an amount to be agreed upon by the parties at the time, which amount shall be based on an appraisal of the Site's thencurrent value, as improved, after considering the impact of the ground lease's income and rent restrictions for the Project's affordable apartments during the option period;
- Metro's receipt of 33% of all gross rent paid or credited to the Developer for use of the Project's 2,440 square feet of commercial space;

- Metro's receipt of 33% of all net proceeds received by the Developer for the sale or refinancing of the Project, subject to a necessary and reasonable cap on net sale proceeds to avoid income tax-related issues for the Project; and
- Metro's receipt of a pro-rata share of Developer construction cost savings following the construction of the Project based on the amount that Metro's \$3,117,000 capitalized rent discount bears to the sum of all public subsidies provided to the Project, subject to a necessary and reasonable cap to avoid income tax-related issues for the Project.

## Proposed Ground Lease Rent Discount

The Metro Joint Development Policy adopted in 2016 allows Metro to discount joint development ground lease rent up to 30% below the fair market rent in order to accommodate affordable housing for households earning up to 60% of AMI.

The proposed \$1,200,000 in capitalized rent represents a discount of \$3,117,000 (approximately 72%) from the Site's \$4,317,000 fair market value, as determined by a recent appraisal. The requested discount exceeds the Joint Development Policy's 30% maximum but is necessary for the Project's financial feasibility. It was arrived at after an analysis of the Project's finances with the support of a financial consultant and an exploration of funding alternatives with the Developer.

The proposed higher discount results from the following factors:

- a. A relatively high market value for the Site;
- b. Current reduced tax credit valuations resulting in less equity for the Project;
- c. Restricted affordable rents for the Project's apartments that cannot be adjusted to absorb the relatively high land cost, increasing construction costs in Los Angeles County and the cost associated with the additional Metro measures regarding archaeological and paleontological resources; and
- d. Limited or restricted public subsidies available to support the Project.

Staff worked with the Developer to identify reasonable additional subsidies for the Project but found that (a) the Project was unlikely to obtain an award under some subsidy programs; (b) the Project did not qualify for other subsidy programs, or (c) the subsidy program had not provided clear or reasonable timelines when funding would be available. Metro's financial consultant has verified that the Developer has pursued all reasonable subsidies for the Project and has also indicated that the Project's cost is reasonable. These determinations have led the consultant to conclude that the discounted ground lease rent is justified and needed to make the Project financially viable.

Notwithstanding the forgoing, the Term Sheet (Attachment A) provides for potential additional compensation to Metro as noted in the *Key JDA and Ground Lease Provisions* section above. This additional compensation, plus the \$1,200,000 in capitalized rent, is deemed reasonable compensation in the current market for the proposed ground lease given the nature of the Project.

#### **CEQA** Actions

The City of Los Angeles, as the lead agency under CEQA, adopted, pursuant to Public Resources

Code Section 21155.2, the Sustainable Communities Environmental Assessment ("SCEA") prepared for the Project and known as City of Los Angeles Department of City Planning Case No. ENV-2019-2314-SCEA. After conducting its own independent analysis, staff is recommending that Metro, as a potentially responsible agency, also consider the environmental effects of the Project as shown in the SCEA (Attachment B) and find that the Project is exempt from CEQA as a sustainable communities project (i.e.; a transit priority project meeting the requirements of Public Resources Code Section 21155.1(a), (b) and (c)(1)). Staff is also recommending that the Board adopt the additional measures regarding archaeological and paleontological resources. These additional measures, which are set forth in Attachment C, address the proper identification and handling of any archaeological and paleontological resources. Upon Board approval of the recommended actions, staff will file a Notice of Exemption for the Project with the County Clerk and the State Clearinghouse, which will be consistent with the Project's CEQA exemption and the Board's CEQA-related actions.

## EQUITY PLATFORM

Consistent with the Equity Platform pillar "listen and learn," the Project has undergone a robust community engagement process as noted above. In addition, the Project provides an opportunity to "focus and deliver" by adding much needed transit-accessible, affordable housing stock to the community.

## DETERMINATION OF SAFETY IMPACT

Approval of this item will have no impact on safety as it merely authorizes the execution of a JDA, ground lease and other Development Documents for the Project. Once the ground lease is executed and construction of the Project commences, staff will oversee construction activities to ensure that they do not adversely impact Metro property, transit operations or the continued safety of staff, contractors and the public.

## FINANCIAL IMPACT

Funding for Project-related joint development activities is included in the adopted FY21 budget under Cost Center 2210, Project 401019. Metro costs related to the Project that are not reimbursed by the Developer will be funded from General Funds, which are eligible for bus and rail operating and capital expenses.

#### Impact to Budget

There is no impact to the adopted FY21 budget, which includes costs associated with negotiation of the JDA, ground lease and other Development Documents, the review of the Project's design and the support of outreach efforts. No new capital investment or operating expenses are anticipated to implement the Project, and revenues from a Developer deposit offset certain staff and Project-related professional service costs.

## **IMPLEMENTATION OF STRATEGIC PLAN GOALS**

The recommended action supports the Strategic Plan Goal to "enhance communities and lives through mobility and access to opportunity." By advancing the Project, which includes delivery of commercial space and critical transit-accessible, affordable housing to the Boyle Heights community, the recommended action will specifically implement Initiative 3.2, which states "Metro will leverage its transit investments to catalyze transit-oriented communities and help stabilize neighborhoods where these investments are made."

## ALTERNATIVES CONSIDERED

The Board could choose not to authorize execution of the JDA and ground lease. Staff does not recommend this alternative since proceeding with the Project is the quickest and surest way to bring much needed transit-accessible, affordable housing to the community, which is in alignment with Metro's Strategic Plan and Equity Platform. The Developer's longstanding commitment to the Project, including their financial investment to date, provides further reason not to choose this alternative.

#### NEXT STEPS

Upon approval of the recommended actions, Metro and the Developer will execute the JDA in accordance with the terms and conditions set forth in the Term Sheet (Attachment A). Upon execution of the JDA, staff and the Developer will work to (a) meet the conditions necessary to execute the ground lease to each party's satisfaction, and (b) complete predevelopment activities for the Project, including securing all financing for the Project, satisfying City of Los Angeles entitlement-related contingencies for building permit issuance, and obtaining a building permit. In addition, design refinements will be finalized, concluding in a Metro-approved set of construction drawings. Developer-led community engagement will continue, with Project updates to the BHNC in the first quarter of 2021 and thereafter to the BHNC, BHNC PLUC and the DRAC, as needed due to substantial Project changes, and prior to Project lease-up to ensure that qualified Boyle Heights residents are ready to apply for this important affordable housing opportunity. Ultimately, the parties anticipate execution of a ground lease in the fourth quarter of 2021 in accordance with the terms and conditions set forth in the Term Sheet (Attachment A). Construction of the Project is expected to commence promptly thereafter and should be completed two years hence.

Staff will also continue to work with the Developer under the ENA to advance the restoration of the Victorian home currently stored on Metro-owned property located across from the Site on Soto Street. This work will include Developer-led engagement with the community, identification of project funding, obtaining project entitlements and CEQA clearance (if needed), and negotiation of key JDA and ground lease terms and conditions.

## **ATTACHMENTS**

Attachment A - Summary of Key Terms and Conditions Attachment B - Sustainable Communities Environmental Assessment Attachment C - Additional Measures Regarding Archaeological and Paleontological Resources Attachment D - Site Plan and Renderings Prepared by: Greg Angelo, Senior Director, Countywide Planning & Development, (213) 922-3815 Nick Saponara, Executive Officer, Transit Oriented Communities, (213) 922-4313 Holly Rockwell, SEO, Real Estate, Transit Oriented Communities, Transportation Demand Management (213) 922-5585

Reviewed by: Jim de la Loza, Chief Planning Officer, (213) 922-2920

Phillip A. Washington Chief Executive Officer

# SUMMARY OF KEY TERMS AND CONDITIONS OF JOINT DEVELOPMENT AGREEMENT AND GROUND LEASE FOR THE LOS LIRIOS JOINT DEVELOPMENT PROJECT AT LACMTA'S 1<sup>ST</sup>/SOTO STATION

# (DATED: JANUARY 31, 2021)

This Summary of Key Terms and Conditions ("**Term Sheet**") outlines the key terms and conditions of a development transaction by and between the Los Angeles County Metropolitan Transportation Authority ("**LACMTA**") and a joint venture between East LA Community Corporation, a California nonprofit public benefit corporation ("**ELACC**"), and Bridge Housing Corporation – Southern California, a California nonprofit public benefit corporation (collectively with ELACC, the "**Developer**"), and their affiliates and related development entities, with respect to certain LACMTA real property situated on the southwest corner of 1<sup>st</sup> and Soto Streets, in the community of Boyle Heights, in the City of Los Angeles. The development transaction contemplates, among other things, (a) a proposed Joint Development Agreement ("**JDA**") between LACMTA and Developer, and (b) a proposed ground lease ("**Ground Lease**") between LACMTA and a limited partnership that is an affiliate of Developer and created for the purposes of the development, construction and operation of the Project defined below ("**Ground Lease Tenant**"). The purpose and intent of this Term Sheet is to set forth the general terms and conditions of the development transaction, including the JDA and Ground Lease. Any Section numbers referenced herein shall refer to the corresponding Section numbers in this Term Sheet.

#### 1. GENERAL DESCRIPTION

**1.1 DEVELOPMENT SITE:** LACMTA is the fee owner of approximately 47,200 square feet of real property located on the southwest corner of 1<sup>st</sup> and Soto Streets, in the community of Boyle Heights, in the City of Los Angeles (the "LACMTA Property"). The proposed development site (the "**Premises**") is an approximately 29,127-square foot portion of the LACMTA Property, consisting of (1) a portion of an existing landscaped plaza (the "Soto Station Plaza") surrounding a portal leading to the Metro L Line's (formerly, the Metro Gold Line's) subterranean Soto station ("Soto Station"), and (2) two vacant lots situated southerly thereof. The remaining, approximately 18,073 square foot portion of the LACMTA Property (the "LACMTA Transit Property") contains Soto Station, the portal, and most of the Soto Station Plaza, which includes seating, trees, landscaping and at-grade and subsurface subway station improvements. The Premises, the LACMTA Property and the LACMTA Transit Property are depicted on Exhibit 1 attached hereto.

1.2 DEDICATIONS:	LACMTA will consider any dedications and grants of LACMTA's real property rights in the LACMTA Property to the City of Los Angeles or other public or quasi-public entities as are reasonably necessary to support the development, construction, and operation of the Project (defined below), subject to such reasonable compensation as is acceptable to LACMTA. Dedications and grants approved by LACMTA shall be referred to herein as " <b>Dedications</b> ." Developer has informed LACMTA that, as of the date of this Term Sheet:			
	1. T c	he City of Los Angeles is requiring the following edications:		
	e	<ul> <li>a 3-foot-wide dedication for public right-of-way purposes along the full length of the LACMTA Property's frontage along 1<sup>st</sup> Street;</li> </ul>		
	b	<ul> <li>a 1.75-foot-wide dedication for public right-of-way purposes along the full length of the LACMTA Property's frontage along Soto Street;</li> </ul>		
	с	<ul> <li>a 4-foot-wide dedication for public right-of-way purposes along the full length of the LACMTA Property's frontage along an alley on the west side of the LACMTA Property; and</li> </ul>		
	c	<ul> <li>a dedication at the corner of 1<sup>st</sup> and Soto Streets at the LACMTA Property's northeast corner consisting of either a 20-foot radius property line return or a 15-foot by 15-foot corner cut.</li> </ul>		
	2. [ b	Developer is unaware of any other dedications that will e required for purposes of the Project.		
	The forgoing approval of <b>Board</b> "), LA dedication(s entered into not negative below) that a	g dedications are depicted on <u>Exhibit 1</u> . Subject to the the LACMTA Board of Directors (the " <b>LACMTA</b> CMTA does not take exception to the subject ); provided that the Developer and LACMTA have the JDA and further provided that such dedications do ly affect existing Public Transit Facilities (defined are situated within or near the dedication area.		
1.3 PROPOSED PROJECT:	The propose without limit apartments one (1) of w as is more p as <u>Exhibit 2</u> approximate (50) parking	ed development project (the " <b>Project</b> ") will include, ation: (a) sixty-two (62) to sixty-four (64) rental (all will be income-restricted affordable units except for hich will be an unrestricted property manager's unit), articularly indicated on the Unit Mix attached hereto (collectively, the " <b>Affordable Housing</b> "), (b) by 2,440 square feet of commercial space, and (c) fifty spaces (thirty-eight (38) for support of the residential		

	portion of the Project and the remaining twelve (12) for support of the commercial portion of the Project). Developer intends to provide sixty-four (64) apartments in the Project, but this amount may be reduced by elimination of one or both of the Project's two (2) ground floor apartments if such reduction is reasonably necessary for Project feasibility. The total of fifty (50) parking spaces noted above is inclusive of four (4) residential parking spaces and six (6) commercial parking spaces that are in excess of the number of required Project parking spaces pursuant to the Project's entitlements from the City of Los Angeles. The final number of Project parking spaces, if such spaces must reasonably be removed to accommodate a requirement that is imposed by the Department of Building and Safety of the City of Los Angeles as part of its permit approvals for the Project. To the extent commercial parking spaces before reducing excess residential parking spaces and (ii) remove the fewest number of excess parking spaces needed to accommodate any such Department of Building and Safety requirement. The Project shall comply with the City of Los Angeles' Green Building Code and shall be constructed to the standards of the GreenPoint Rated Program (or the equivalent, as reasonably agreed by LACMTA).
1.4 PHASED DEVELOPMENT:	The Project will be constructed in a single phase.
2. GENERAL CONDITIONS	
2.1 FEDERAL, STATE AND LOCAL FUNDING SOURCE APPROVAL:	Initial investigation by LACMTA indicates that the parcels comprising the LACMTA Property were acquired by LACMTA for purposes of the Metro L Line (formerly the Metro Gold Line), which was constructed using Federal and State funds. Therefore, the construction and operation of the Project, the Ground Lease transaction, the Dedications and other development-related matters contemplated in this Term Sheet are subject to: (a) applicable Federal and State approvals/concurrences; (b) LACMTA confirmation that such actions will not violate any bond funding related requirements or restrictions imposed on LACMTA, the LACMTA Property or the Metro L Line (formerly the Metro Gold Line), and (c) applicable bond trustee and bond holder approval (collectively, the " <b>Funding Approvals</b> ") After execution

Funding Approvals, subject to the requirements of funding providers.

#### 2.2 DEVELOPMENT

**ENTITLEMENTS** & OTHER LEGAL **REQUIREMENTS:** Developer has or will have obtained, prior to any LACMTA Board action with respect to the JDA or the Ground Lease, at its sole cost and expense, all required entitlements for the Project from the City of Los Angeles, as well as the completion of all CEQA Review (defined in the next sentence) related to the Project. "CEQA Review" of the Project, shall mean (a) environmental review and clearance of the Project pursuant to CEQA by the City of Los Angeles, as Lead Agency under CEQA, and the adoption of all related approvals/findings/determinations by the Los Angeles City Council, and (b) environmental review and clearance of the Project pursuant to CEQA by LACMTA, as a Responsible Agency under CEQA, and the adoption of all related approvals/findings/determinations by the LACMTA Board. LACMTA shall perform its environmental review of the Project after the City of Los Angeles has completed its review and the Los Angeles City Council has adopted approvals/findings/determinations resulting from that review. Developer and Ground Lease Tenant shall comply with all applicable City of Los Angeles zoning, land use, planning and entitlement-related requirements and other legal requirements related to the development, construction and operation of the Proiect. 2.3 As-Is CONDITION: The Premises are being offered to Developer and Ground Lease Tenant for construction and operation of the Project under the Ground Lease in their as-is condition, without any warranty by LACMTA. **2.4 COMPLIANCE WITH LAWS:** During the term of the JDA and Ground Lease, Developer and Ground Lease Tenant (as applicable), at their sole expense, shall comply with all applicable federal, state and local laws, ordinances, regulations, rules and orders with respect to their respective rights and responsibilities under the JDA and Ground Lease. Furthermore, Developer shall acknowledge in the JDA that, in LACMTA's performance of its obligations and adherence to the terms and conditions of the JDA, LACMTA is subject to all applicable federal and state laws (including, but not limited to, California Government Code Section 54220 et seq. (the "Surplus Land Act")), and that LACMTA shall not be obligated to perform any obligation or adhere to any covenant under the JDA if such performance or adherence would result in a violation of any such laws.

2.5 SUPERSEDURE:	This Term Sheet supersedes and replaces any and all term sheets or summaries of key terms and conditions relating to the Premises, the Project or any joint development agreement or ground lease with respect to the Premises dated prior to the date of this Term Sheet. Notwithstanding the foregoing, that certain Exclusive Negotiation Agreement and Planning Document between LACMTA and Developer, dated June 22, 2016, as amended (the " <b>ENA</b> "), shall remain in full force and effect and be unchanged by this Term Sheet.
3. Key JDA Terms:	
3.1 JDA - GENERALLY:	The JDA will address matters between Developer and LACMTA regarding the Project and the LACMTA Property commencing on the JDA Commencement Date (defined below) and, unless terminated sooner, ending on the JDA Expiration Date (defined below). After (a) the LACMTA Board has authorized execution of the JDA, Ground Lease and other transaction-related documents in accordance with this Term Sheet and (b) the CEQA Review is complete, then LACMTA and Developer will enter into a JDA containing terms and conditions that are substantially consistent with those set forth in this Term Sheet, subject to any modifications as directed by the LACMTA Board that are agreed to by Developer.
3.2 JDA TERM:	The JDA term (the " <b>JDA Term</b> ") shall commence upon execution of the JDA by LACMTA and Developer (the " <b>JDA</b> <b>Commencement Date</b> ") and shall expire on the earlier to occur of December 31, 2022 or execution of the Ground Lease (" <b>JDA</b> <b>Expiration Date</b> "). Notwithstanding the foregoing, LACMTA shall have the right to terminate the JDA for defaults that will be detailed in the JDA, subject to applicable notice and cure periods.
3.3 JDA CONSIDERATION/ HOLDING RENT:	As consideration for the rights granted to Developer during the JDA Term, commencing with the JDA Commencement Date and continuing throughout the JDA Term, Developer will pay LACMTA a monthly non-refundable holding rent (" <b>Holding Rent</b> ") at the commencement of each month of the JDA Term in an amount equal to \$2,500. Holding Rent for partial months at the beginning and end of the JDA Term shall be prorated. All Holding Rent due LACMTA shall be non-refundable, but all Holding Rent received by LACMTA shall be applied at Closing (defined below) as a credit against the Capitalized Rent due under the Ground Lease, in the event the Ground Lease is executed.
3.4 CLOSING/CONDITIONS TO CLOSING:	During the term of the JDA, LACMTA and Developer shall (a) open an escrow (" <b>Escrow</b> ") with Commonwealth Title and (b) work in good faith to satisfy certain conditions precedent to
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execution of the Ground Lease that shall be set forth in the JDA (the "**Closing Conditions**"). When all of the Closing Conditions have been satisfied (or waived by the applicable party) and when Developer has assigned to Ground Lease Tenant Developer's right under the JDA to enter into the Ground Lease, then Ground Lease Tenant and LACMTA will enter into the Ground Lease. The "**Closing**" shall occur on the date that Ground Lease Tenant and LACMTA enter into the Ground Lease and LACMTA receives all rent, Deposits and other amounts then due LACMTA under the JDA, the Ground Lease and all other documents and agreements related to the Project or the Ground Lease transaction. Documents related to Closing, including, without limitation, the Ground Lease, will be executed by LACMTA, as one party, and Developer and/or Ground Lease Tenant, as the other party(ies), as is necessary to properly effectuate the Closing.

The Closing Conditions shall include the following requirements: (a) Developer's delivery of evidence and assurances ("Financial Assurances") to LACMTA, via documentation provided by Developer to the satisfaction of LACMTA, demonstrating that Ground Lease Tenant has sufficient financial resources in place to construct and operate the Project, which Financial Assurances will include evidence that all funding sources for construction and operation of the Project are fully committed without reservation; (b) Developer's (or Ground Lease Tenant's) receipt of all governmental approvals necessary (including LACMTA approvals and City of Los Angeles approvals and entitlements) for the development, and construction of the Project, including LACMTA's approval of Final Construction Documents (defined below) (such LACMTA-approved Final Construction Documents, the "Approved Construction Documents"); (c) the City of Los Angeles' and LACMTA's (i) completion of all necessary CEQA Review for the Project, (ii) adoption of all related CEQA approvals, findings and determinations by the Los Angeles City Council and the LACMTA Board, and (iii) the expiration of all applicable statutes of limitation with respect to such approvals, findings and determinations without a lawsuit having been timely filed with respect to the same (but if such a lawsuit is so filed, then the occurrence of the final adjudication or dismissal with prejudice of such lawsuit in a manner that upholds such approvals, findings and determinations); (d) Developer's (or Ground Lease Tenant's) receipt of a "ready to issue" letter from the City of Los Angeles for all building permits necessary for the construction of the Project in accordance with the Approved Construction Documents; (e) Ground Lease Tenant's and LACMTA's execution and delivery of the Ground Lease to Escrow and Ground Lease Tenant's, Developer's and/or LACMTA's execution and delivery (as applicable) of all other transaction documents to Escrow, all as contemplated in the JDA; (f) LACMTA's receipt of all Funding Approvals; (g) LACMTA's receipt of Payment and Performance

Bonds and a Completion Guaranty from Ground Lease Tenant guaranteeing and securing Completion of the Project, each in a form satisfactory to LACMTA; and (h) LACMTA's receipt of assurances from Developer that Ground Lease Tenant is ready to commence construction of the Project promptly following the Closing. As used in this Term Sheet, the term "**Completion of the Project**" shall occur when Ground Lease Tenant receives a final certificate of occupancy from the City of Los Angeles permitting occupancy of the entire Project.

- **3.5 JDA DESIGN REVIEW:** During the JDA Term and the Construction Period (defined below), LACMTA will have the right to review and approve the design of the Project to the extent of any design elements that affect, directly or indirectly the following (collectively, the "LACMTA Design Concerns"):
  - (a) The LACMTA Operations-Related Concerns (defined below);
  - (b) The exterior of the Project, including its appearance, scale, configuration, height, massing, modulation, roof line, materials, entries, fenestration, balconies, signage, and lighting;
  - (c) The public realm surrounding the Project, including public features such as outdoor seating, lighting, and street trees, and the pedestrian experience along Project frontages;
  - (d) The relationship of the Project to the surrounding community, including adjacent properties, the Soto Station Plaza, and public streets, alleys and spaces;
  - (e) Soto Station Plaza, including its landscaped and hardscaped elements, and other public features such as seating and other street furnishings, lighting, and street trees;
  - (f) The Project's public open spaces, including landscaped and hardscaped elements, and other public features such as seating and other street furnishings, lighting, and street trees;
  - (g) The Project's public bicycle and vehicular elements and its public pedestrian elements and the relationship of such elements to building entries, transit service and the public realm and the quantity of private bicycle parking spaces for the Project, and the relationship of such private bicycle parking spaces to building entries;
  - (h) A change in the scope of the Project from that set forth in the <u>Section 1.3;</u> and

(i) The commercial space, including its depth, location in the Project, and adequacy of infrastructure for specific uses.

LACMTA shall <u>not</u> have the right to review or approve interior floor plans, or non-structural interior elements, except to the extent of the LACMTA Design Concerns, and shall not have the right to review or approve interior finishes.

LACMTA's exercise of its rights hereunder for matters that <u>are not</u> related to LACMTA Operations-Related Concerns will be at LACMTA's reasonable discretion, except to the extent that the design of the Project as depicted, described and specified on any such plans and specifications <u>does not</u> represent a logical evolution of the design depicted, described and specified on those plans and specifications approved by LACMTA at the preceding level of design development (a "Logical Evolution"). LACMTA's exercise of its rights hereunder for matters that <u>are</u> related to LACMTA Operations-Related Concerns or <u>are not</u> a Logical Evolution will be at LACMTA's sole and absolute discretion. LACMTA's design approval rights as set forth herein are, in part, intended to ensure that the Project meets LACMTA's Satisfactory Continuing Control Requirement (as defined in <u>Section 4.22</u>).

Except as otherwise approved in writing by LACMTA, the Project's Final Construction Documents shall be a Logical Evolution of the plans detailed and referenced in <u>Exhibit 3</u> attached hereto (the "**Entitlement Package Plans**"). LACMTA acknowledges that Developer has provided LACMTA with the plans and specifications detailed on <u>Exhibit 4</u> for LACMTA's review, which LACMTA is in the process of reviewing. These plans and specifications include the Project's Construction Document Progress Plans for all portions of the Project other than the design for the Soto Station Plaza portion of the Project, which is at the Conceptual Design phase of the design development process due to a redesign of this portion of the Project. The Project's Construction Document Progress Plans shows the design of the portion of the Project other than the design to a redesign of the Project addressed therein at 75% completion.

"Final Construction Documents" means final plans and specifications approved by the City of Los Angeles for the construction of the Project and containing details as would be reasonably necessary to allow LACMTA to assess all impacts of such construction in accordance with LACMTA's rights under the JDA.

"LACMTA Operations-Related Concerns" means (a) the operations of LACMTA, including the experience of transit patrons and transit users, (b) LACMTA's exercise of its Retained Rights (defined below) and any area subject to the Retained Rights, (c)

	the LACMTA Transit Property, the Public Transit Facilities, the access to or from each of the same, and the maintenance, repair, modification, renovation and replacement of each of the same, (d) the lateral and subjacent support to the LACMTA Transit Property, the Public Transit Facilities and any area providing support necessary for LACMTA to exercise its Retained Rights, and (e) public, transit patron and LACMTA employee and contractor health and safety.
	"LACMTA Transit Equipment" means all of the equipment, cable, conduit, fixtures, furnishings, and vehicles located or operating in, on, under, over, about, or adjacent to the LACMTA Property and used or installed by LACMTA for any transit purpose, including ticket vending machines, ticket validation and gating systems and other equipment serving a comparable function, map and information cases and directional signs, lighting, security cameras, rail cars, vehicles, tracks, signaling devices, maintenance equipment, public address systems, fire protection equipment, communication antennas, and all other transit related or LACMTA related equipment and vehicles.
	"Public Transit Facilities" means all transit-related or LACMTA- related improvements, structures, stations, equipment, fixtures, trains, subways, buses and furnishings now existing or hereafter located in, on, under, near, adjacent to, and/or passing through, the LACMTA Property, including, without limitation, Soto Station and its related improvements (including the Soto Station Plaza and portal), the LACMTA Transit Equipment, water lines, sanitary sewer lines, storm sewer improvements, electrical lines, antennas, elevator, shafts, vents, portals, and exits.
3.6 FINAL CONSTRUCTION DOCUMENT REVIEW TIMING:	[INTENTIONALLY OMITTED]
3.7 OUTREACH:	During the JDA Term, Developer shall lead and conduct public outreach with respect to the Project in accordance with the outreach plan (" <b>Outreach Plan</b> ") attached hereto as <u>Exhibit 5</u> . Such Outreach Plan may be amended from time to time by Developer, subject to LACMTA's written approval, which approval shall not be unreasonably withheld, conditioned or delayed.
3.8 TRANSFERS, ASSIGNMENT AND SUBLETTING:	Except (a) for a one-time transfer by Developer to Ground Lease Tenant immediately prior to the execution of the Ground Lease and (b) as otherwise approved in writing by LACMTA in its sole and absolute discretion, Developer shall not transfer or assign its rights or obligations under the JDA or any portion thereof.

#### 4. Key Ground Lease Terms:

4.1 GROUND LEASE TENANT:	The tenant under the Ground Lease shall be the Ground Lease Tenant (defined in the preamble).			
4.2 GROUND LEASE – GENERALLY:	At Closing, LACMTA, as landlord, and Ground Lease Tenant, as tenant, will enter into the Ground Lease, which will provide for the development, construction and operation of the Project on the Premises by Ground Lease Tenant, at Ground Lease Tenant's sole cost and expense. The Ground Lease will contain terms and conditions that are substantially consistent with those set forth in this Term Sheet, subject to such modifications as may be directed by the LACMTA Board that are agreed to by Ground Lease Tenant.			
4.3 CONSTRUCTION/ CONSTRUCTION PERIOD:	The Project shall be constructed in accordance with the Approved Construction Documents, which LACMTA, Developer and Ground Lease Tenant intend to be a Logical Evolution (pursuant to <u>Sections 3.5</u> and <u>4.13</u> ) of the Entitlement Package Plans. The Ground Lease will require commencement of construction within thirty (30) days after the Commencement Date (defined below). The construction period for the Project (" <b>Construction Period</b> ") will commence on the Commencement Date and will terminate upon completion of construction of the Project in accordance with the Ground Lease.			
4.4 UNSUBORDINATED GROUND LEASE:	Neither LACMTA's interests under the Ground Lease (including Federal and State interests as a providers of funds for the Metro L Line (formerly the Metro Gold Line)) nor LACMTA's Satisfactory Continuing Control Requirement shall be subordinated to any interest that Ground Lease Tenant or its lenders or investors will have in the Premises. Notwithstanding the foregoing, LACMTA agrees to (a) work in good faith with Ground Lease Tenant and Developer to reach an agreement on the forms of separate riders to the Ground Lease (each, a "Lease Rider") amending the Ground Lease for the benefit of the California Tax Credit Allocation Committee ("TCAC") and, if applicable, the California Department of Housing and Community Development ("HCD"), as is reasonably required by either party in connection with an award of tax credits or other financing for the Project, and (b) upon reaching agreement on a particular form for each Lease Rider, to allow such Lease Rider, once executed, to be recorded against the fee interest in the Premises.			
4.5 GROUND LEASE PREMISES:	The premises under the Ground Lease shall be the Premises.			

4.6 GROUND LEASE TERM:	The initial term of the Ground Lease (the "Initial Ground Lease Term") will commence on the date of the Closing, pursuant to the terms of the JDA (such date being the "Commencement Date"), and will expire on the date occurring fifty-seven (57) years after the Commencement Date. Ground Lease Tenant shall have a single option to extend the Initial Ground Lease Term for an additional forty-two (42) year term (the "Option Period") by providing written notice to LACMTA on or before the fifty-sixth (56th) anniversary of the Commencement Date. The Initial Ground Lease Term as extended by the Option Period shall be the "Ground Lease Term."
4.7 CAPITALIZED GROUND RENT:	Upon execution of the Ground Lease, Ground Lease Tenant shall pay LACMTA a capitalized rent payment (the " <b>Capitalized Rent</b> ") in an amount equal to \$1,200,000 for the Initial Ground Lease Term. The Capitalized Rent reflects a discount of \$3,117,000 (approximately 72%) off of the Premise's \$4,317,000 fair market value.
4.8 Option Period Rent:	Developer shall pay fair market rent for the Option Period ("Option Period Rent") either as (a) a capitalized rent payment paid at the commencement of the Option Period or (b) as a monthly rent payment paid throughout the term of the Option Period. The decision to pay Option Period Rent as either a capitalized payment or a monthly payment shall be at Developer's election made at the time of Developer's exercise of its option to extend the Initial Ground Lease Term pursuant to Section 4.6. If Developer elects the monthly payment option, Option Period Rent shall commence to accrue on the first day of the Option Period and shall be paid monthly, in advance, over the term of the Option Period. Option Period Rent shall be negotiated by LACMTA and Ground Lease Tenant based on appraisals of the Premises procured by each party, as set forth in the Ground Lease. The appraisals shall assume that the Premises are vacant and usable only for those uses permitted under the Ground Lease and, as applicable, subject to any then-existing affordability covenants and all applicable affordability restrictions set forth in <u>Section 4.18</u> . If LACMTA and Ground Lease Tenant are unable to agree on the amount of the Option Period Rent, such amount will be determined by arbitration, as set forth in the Ground Lease. <b>Annual CPI Adjustment</b> . If Developer elects the monthly payment option, Option Period Rent shall be adjusted every five (5) years on the anniversary of the commencement of the Option Period (each such date being an " <b>Option Rent CPI Adjustment Date</b> ") to equal the greater of: (a) the Option Period Rent existing just prior to the Option Rent CPI Adjustment Date and (b) the Option Period Rent existing just prior to the Option Rent CPI

Adjustment Date as adjusted for changes in CPI for the prior 60month period.

**4.9 PERCENTAGE RENT:** Ground Lease Tenant shall pay LACMTA percentage rent in an amount equal to thirty-three percent (33%) of all gross rent paid or credited to Ground Lease Tenant for commercial uses of the Project or the Premises ("**Percentage Rent**"), including without limitation, commercial uses in the Project's 2,440 square feet of commercial space. Percentage Rent shall be calculated on a calendar year basis and shall be due to LACMTA from Ground Lease Tenant annually, in arrears, on March 1<sup>st</sup> of the calendar year following the subject calendar year, with a full accounting of the amount due.

#### 4.10 DISTRIBUTION OF CONSTRUCTION COST SAVINGS:

To the extent that the Project has any Cost Savings (defined below) and subject to receipt of customary approvals from TCAC regarding the distribution of such Cost Savings to the Project's Subsidy Providers (defined below), Ground Lease Tenant shall pay LACMTA's Pro Rata Share of Cost Savings (defined below) to LACMTA, within sixty (60) days after the Ground Lease Tenant's receipt of the Forms 8609 from TCAC (certifying that the Developer-submitted TCAC Cost Certification (defined below) is acceptable); provided, however, that such amount shall not exceed the Capitalized Foregone Rent (defined below). Ground Lease Tenant shall submit the TCAC Cost Certification to TCAC no later than one (1) year after Completion of the Project and anticipates receipt of the Forms 8609 within one (1) year after such submission. LACMTA shall have audit rights to verify the calculation of Cost Savings and LACMTA's Pro Rata Share of Cost Savings.

"**Capitalized Foregone Rent**" means \$3,117,000 (i.e. the \$4,317,000 fair market value of the Premises minus the \$1,200,000 Capitalized Rent.

"**Cost Savings**" means total Project Funding minus total Development Costs.

"**Development Costs**" means the actual hard and soft costs incurred by Ground Lease Tenant for the initial development and construction of the Project, including, without limitation all deferred developer fees due Ground Lease Tenant, as reflected on Ground Lease Tenant's TCAC Cost Certification.

"LACMTA's Pro Rata Share of Cost Savings" shall be equal to the Cost Savings (if any) multiplied by the Capitalized Foregone Rent and divided by the sum of the Capitalized Foregone Rent and all Soft Loans.

	" <b>Project Funding</b> " means all public and private funding provided to Ground Lease Tenant for the initial development and construction of the Project, including the Total Project Subsidy.
	<b>"Soft Loans</b> " means public loans provided to Ground Lease Tenant for purposes of the development of the Project that allow debt service payments to be paid from Project net cash flow (i.e. residual receipts). Soft Loans exclude any operating subsidies.
	" <b>Subsidy Providers</b> " means LACMTA with respect to the Foregone Rent and all Soft Loan providers with respect to their Soft Loans.
	<b>"TCAC Cost Certification</b> " means that certain cost certification prepared by Ground Lease Tenant and approved by TCAC in accordance with California Code of Regulations Title 4, Division 17, Chapter 1, Section 10322(i)(2) and setting forth the actual Development Costs, Project Funding and Total Project Subsidy for the initial development and construction of the Project.
	<b>"Total Project Subsidy</b> " means all public funding provided to Ground Lease Tenant for the initial development and construction of the Project, including Soft Loans and the Capitalized Foregone Rent (and excluding any operating subsidy).
4.11 NET LEASE:	All rent to be paid by Ground Lease Tenant under the Ground Lease shall be absolutely net to LACMTA, without offset, deduction or withholding. Ground Lease Tenant shall be responsible for all capital costs and operating expenses attributable to the development, construction, operation and maintenance of the Project, including all taxes and assessments levied upon the Project or any interest in the Ground Lease. Ground Lease Tenant is aware that the Premises are also subject to possessory interest taxes, which shall be paid by Ground Lease Tenant.
4.12 SALE/REFINANCING PROCEEDS:	Upon a Refinancing (defined below) of the Project, Ground Lease Tenant shall pay LACMTA, as a fee for LACMTA's consent in connection with such Refinancing, an amount equal to thirty-three percent (33%) of all Refinancing Net Proceeds (defined below) received by Ground Lease Tenant for the Refinancing of the Project. Upon a Sale (defined below) of the Project, Ground Lease Tenant shall pay LACMTA, as foregone rent in connection with the Sale of the Project, an amount equal to the lesser of (a) thirty-three percent (33%) of all Sale Net Proceeds (defined below) received by Ground Lease Tenant for the Sale of the Project, and (b) Cumulative Foregone Rent (defined below).

LACMTA shall have audit rights to verify the calculation of Refinancing Net Proceeds and Sale Net Proceeds.

"CPI Adjusted Foregone Rent" means the greater of: (a) the Foregone Rent existing just prior to a particular Foregone Rent CPI Adjustment Date and (b) the Foregone Rent existing just prior to such Foregone Rent CPI Adjustment Date as adjusted for changes in the CPI for the prior 12-month period.

"Cumulative Foregone Rent" means with respect to a particular Sale, the sum of the Foregone Rent that has accrued over the period between the Commencement Date and the Sale date, less the amount of any Sale Net Proceeds or Foregone Rent previously paid to LACMTA.

**"Foregone Rent**" means the annual rent (or portion thereof) foregone by LACMTA as a result of LACMTA receiving less than fair market rent under the Ground Lease, which amount shall equal:

(a) For the Initial Ground Lease Term:

- i. For the first year of the Ground Lease Term, the amount resulting from multiplying the \$3,117,000 Capitalized Rent discount by a 7% cap rate; and
- ii. For each subsequent year of the Ground Lease Term, the CPI Adjusted Foregone Rent; and
- (b) For the Option Period: Amount(s) mutually agreed to by LACMTA and Ground Lease Tenant at the time that the Option Period Rent is established pursuant to <u>Section 4.8.</u>

Notwithstanding the foregoing, the Foregone Rent for the year in which LACMTA receives LACMTA's Pro Rata Share of Cost Savings (if any) shall be adjusted downward as follows:

The Foregone Rent for the Initial Ground Lease Term shall be recalculated as the sum of the \$3,117,000 Capitalized Rent discount minus LACMTA's Pro Rata Share of Cost Savings (if any) multiplied by a 7% cap rate. The foregoing sum shall then be adjusted for changes in the CPI between the first year of the Ground Lease Term and the year in which the adjustment occurs, which shall result in the **"Adjusted Foregone Rent**". Each subsequent year of the Initial Ground Lease Term shall apply the Adjusted Foregone Rent to the CPI adjuster in the definition of CPI Adjusted Foregone Rent.

**"Foregone Rent CPI Adjustment Date**" means each annual anniversary of the Commencement Date.

"**Refinancing**" shall be defined as the creation or substantial modification of a loan secured directly or indirectly by any portion of the Premises, the Project, Ground Lease Tenant, and/or Ground Lease Tenant's leasehold interest under the Ground Lease.

"Refinancing Net Proceeds" means with respect to each Refinancing, the gross principal amount of the Refinancing, less (a) the amount of any then-existing debt secured directly or indirectly by any portion of the Premises, the Project, Ground Lease Tenant, and/or Ground Lease Tenant's leasehold interest under the Ground Lease that is satisfied out of the Refinancing proceeds, (b) amounts to be used by Ground Lease Tenant to make repairs or capital improvements to the Project within twenty four (24) months after the closing date of the Refinancing, and (c) the following transaction costs and expenses paid by Ground Lease Tenant to any non-affiliate of Ground Lease Tenant in connection with the consummation of the Refinancing, to the extent such costs are commercially reasonable: escrow fees, title charges, lender fees or charges, recording costs, brokerage commissions, attorneys' fees and a reasonable developer fee to Ground Lease Tenant or an affiliate thereof to cover costs related to the consummation and administration of the Refinancing.

**"Sale**" means the direct or indirect transfer of any portion of the beneficial interest in the Premises, the Project, and/or Ground Lease Tenant's leasehold interest under the Ground Lease.

"Sale Net Proceeds" means with respect to each Sale, the total consideration less (a) the amount of any then-existing debt secured directly or indirectly by any portion of the beneficial interest in the Premises, the Project, and/or Ground Lease Tenant's leasehold interest under the Ground Lease that is satisfied out of the Sale proceeds, and (b) the following transaction costs and expenses paid by Ground Lease Tenant to any non-affiliate of Ground Lease Tenant in connection with the consummation of the Sale, to the extent such costs are commercially reasonable: escrow fees, title charges, lender fees or charges, recording costs, brokerage commissions and attorneys' fees (and, for re-syndications only, a reasonable developer fee to Ground Lease Tenant or an affiliate thereof to cover costs related to the consummation and administration of the re-syndication proceeds).

4.13 GROUND LEASE				
DESIGN REVIEW:	With respect to the initial construction of the Project, Ground Lease Tenant shall not make any changes to the Approved Construction Documents or the Project that affect the LACMTA Design Concerns without the prior consent of LACMTA and any such changes shall be requested in writing by Ground Lease Tenant. During the Construction Period, LACMTA will have design review rights with respect to any such changes in the same manner as set forth in <u>Section 3.5</u> . LACMTA's exercise of its rights hereunder for changes that represent Logical Evolutions of the design and are not related to LACMTA Operations-Related Concerns will be at LACMTA's reasonable discretion. LACMTA's exercise of its rights hereunder for changes that are related to LACMTA Operations-Related Concerns or are not Logical Evolutions of the design will be at LACMTA's sole and absolute discretion. In addition to the foregoing, LACMTA shall retain similar design approval rights as set forth in <u>Section 3.5</u> for any substantive Project changes or improvements sought by Ground Lease Tenant after the initial construction of the Project. LACMTA's design approval rights as set forth herein are, in part, intended to ensure that the Project meets LACMTA's Satisfactory Continuing Control Requirement.			
4.14 DEEMED APPROVAL:	[INTENTIONALLY OMITTED]			
4.15 MAINTENANCE AND OPERATIONS:	<ul> <li>Ground Lease Tenant shall maintain and operate all portions of the Project and the Premises at its sole cost and expense. Notwithstanding the foregoing:</li> <li>a. LACMTA shall power wash, at its sole cost and expense, the surface of that portion of the Soto Station Plaza areas situated on the Premises (as indicated on <u>Exhibit 6</u> attached hereto) when it power washes the remainder of the Soto Station Plaza surface that is not situated on the Premises;</li> </ul>			
	b. Ground Lease Tenant shall adequately water (from Ground Lease Tenant's metered sources) and maintain, at its sole cost and expense, all Soto Station Plaza planter trees and planter landscaping (as indicated on <u>Exhibit 6</u> attached hereto), whether such planter trees and planter landscaping are situated on or off the Premises;			
	<ul> <li>c. Ground Lease Tenant shall maintain, at its sole cost and expense, all Soto Station Plaza planter structures situated on or predominantly on the Premises (as indicated on <u>Exhibit 6</u>), including all seating situated thereon or incorporated therein;</li> </ul>			

- d. Ground Lease Tenant shall not be obligated to maintain or provide irrigation to any Soto Station Plaza trees that are not part of Ground Lease Tenant's obligations set forth in Item b, above (including any such trees situated on the Premises), which trees shall be irrigated from LACMTA metered sources; and
- e. Ground Lease Tenant shall not be obligated to maintain any Soto Station Plaza planter structures that are not situated on the Premises (as indicated on <u>Exhibit 6</u>), including all seating situated thereon or incorporated therein.

All maintenance shall be pursuant to maintenance and operations standards to be mutually agreed upon by Ground Lease Tenant and LACMTA and set forth in the Ground Lease, provided that the LACMTA power washing noted above shall be subject to LACMTA's cleaning schedule (which, as of the date of this Term Sheet, is between 10pm and 4am) and cleaning frequency (which, as of the date of this Term Sheet, is one time per month).

#### 4.16 DEMOLITION/DEMOLITION

SECURITY:

At the expiration or earlier termination of the Ground Lease ("**Expiration Date**"), at LACMTA's option, as specified in writing by LACMTA up to ninety (90) days after the Expiration Date, Ground Lease Tenant shall (a) demolish and remove the Project and any improvements located on the Premises, exclusive of any LACMTA improvements and/or transportation-related amenities and facilities then located on the Premises, and (b) return the Premises to LACMTA in its otherwise original condition (collectively, the "**Demolition**"), all at Ground Lease Tenant's sole cost and expense. Ground Lease Tenant shall have no right to demolish or remove the Project or any improvements on the Premises that LACMTA does not instruct Ground Lease Tenant to demolish or remove.

On the forty fifth (45<sup>th</sup>) anniversary of the Commencement Date, Ground Lease Tenant shall deliver to LACMTA a report for LACMTA's review and approval prepared by a construction and demolition expert reasonably approved by LACMTA that details the means and methods that would be employed to complete the full Demolition of the Project ("**Demolition Report**"). The obligations set forth in this <u>Section 4.16</u> apply even though <u>Section 4.6</u> does not require Ground Lease Tenant to make an election regarding the exercise of its option to extend the Initial Ground Lease Term until the fifty-sixth (56th) anniversary of the Commencement Date. The Demolition Report shall be prepared at Ground Lease Tenant's sole cost and expense and shall include a detailed cost estimate for such full Demolition. The

Demolition Report shall detail (a) a form of security proposed by Ground Lease Tenant to secure, for the benefit of LACMTA, the funding necessary to complete the full Demolition (the "Demolition Security"), and (b) a schedule reasonably satisfactory to LACMTA for the funding of the Demolition Security by Ground Lease Tenant, which schedule shall in all events provide for delivery of the Demolition Security to LACMTA no later than five (5) years prior to the Expiration Date. The Demolition Report shall be subject to LACMTA's reasonable approval. The form of Demolition Security can be a deposit of funds, a letter of credit, a bond or other form of security, each in form and amount, and from an issuer, reasonably satisfactory to LACMTA in accordance with the LACMTA-approved Demolition Report. Upon the completion of the Demolition, if any, by Ground Lease Tenant and performance of any other obligations of Ground Lease Tenant under the Ground Lease, subject to set off by LACMTA for any amounts payable by Ground Lease Tenant to LACMTA pursuant to the Ground Lease, LACMTA shall return/release the Demolition Security to Ground Lease Tenant.

If Ground Lease Tenant elects to exercise its option to extend the Initial Ground Lease Term, then the Demolition Report shall be delivered to LACMTA on or before the eighty-seventh (87th) anniversary of the Commencement Date.

The Ground Lease shall set forth further details regarding the specifics and procedures related to the Demolition, the Demolition Report and the Demolition Security.

#### 4.17 FINANCING AND ENCUMBRANCES:

Subject to LACMTA's reasonable approval, Ground Lease Tenant may encumber its leasehold estate with mortgages, deeds of trust or other financing instruments; provided, however, in no event shall LACMTA's fee title interest, the rent payable to LACMTA under the Ground Lease or LACMTA's Satisfactory Continuing Control Requirement, be subordinated or subject to Ground Lease Tenant's financing or other claims or liens (except as set forth in Section 4.19 in connection with Project-related affordable housing financing sources). Such encumbrances and financings shall be subject to LACMTA's reasonable approval, except with respect to certain "Permitted Financing Events" meeting specific criteria to be set forth in the Ground Lease, which shall not require LACMTA's approval. Subject to the satisfaction of specific criteria to be set forth in the Ground Lease and provided that such financing is from institutional lenders, governmental lenders or quasi-governmental lenders, Permitted Financing Events shall include: (i) such financing as is required to convert from construction to permanent financing and (ii) such financing as is required to maintain the financial feasibility of the Project in the event of the loss or reduction of the Project Based Vouchers

subsidy provided to support the operation of the twenty (20) apartments providing permanent supportive housing to formerly homeless households earning up to 30% of the Area Median Income ("**AMI**").

#### 4.18 AFFORDABILITY REQUIREMENTS:

The Ground Lease shall require Ground Lease Tenant to restrict the Project's Affordable Housing throughout the Initial Ground Lease Term as follows:

- a. Twenty (20) permanent supportive housing apartments restricted to occupancy by formerly homeless households earning up to 30% of the AMI;
- b. Six (6) apartments restricted to occupancy by households earning up to 30% of AMI<sup>1</sup>;
- c. Seventeen (17) apartments restricted to occupancy by households earning up to 40% of AMI<sup>2</sup>;
- d. Fifteen (15) apartments restricted to occupancy by households earning up to 50% of AMI; and
- e. Five (5) apartments restricted to occupancy by households earning up to 60% AMI.

The Ground Lease shall also require that the unit mix for the Project's apartments be restricted throughout the Initial Ground Lease Term as set forth on the Unit Mix table attached hereto as Exhibit 2. Notwithstanding the foregoing, the Ground Lease shall provide that in the event of a reduction in or loss of Project Based Vouchers (or a similar operating subsidy) supporting operations related to the Project's twenty (20) permanent supportive housing apartments ("PBV Reduction") during the Initial Ground Lease Term, Ground Lease Tenant may, during the period of any such PBV Reduction and only with respect to any of the twenty (20) permanent supportive housing apartments that become vacant during such period, lease such apartment to households that do not require supportive services and/or earn up to 60% of AMI; provided that Developer shall be allowed to utilize such measures only for the duration of and to the extent of the PBV Reduction. All income restrictions shall be based on AMI levels set by TCAC.

The Ground Lease shall require Ground Lease Tenant to restrict the Project's Affordable Housing throughout the Option Period to occupancy by households earning up to 80% of AMI.

#### 4.19 AFFORDABLE HOUSING &

<sup>&</sup>lt;sup>1</sup> The total number of apartments restricted to households earning up to 30% of AMI could be reduced to a total of five (5), if Developer determines (and demonstrates to the reasonable satisfaction of LACMTA) that such reduction is necessary for the Project to be financially feasible.

<sup>&</sup>lt;sup>2</sup> The total number of apartments restricted to households earning up to 40% of AMI could be reduced to a total of sixteen (16), if Developer determines (and demonstrates to the reasonable satisfaction of LACMTA) that such reduction is necessary for the Project to be financially feasible.

#### ENTITLEMENT-RELATED

COVENANTS:	Ground Lease Tenant may encumber its leasehold estate with affordable housing covenants and other covenants reasonably
	housing funding sources or the City of Los Angeles as a condition to granting Project approvals, entitlements and building permits, which covenants shall be subject to LACMTA's review and reasonable approval. LACMTA will reasonably consider the encumbrance of its fee title interest with certain covenants, if required by Ground Lease Tenant's Project-related affordable housing funding sources or the City of Los Angeles as a condition to granting Project approvals, entitlements or building permits; provided that Ground Lease Tenant agrees to perform all obligations under said covenants during the Ground Lease Term and indemnify LACMTA for all claims and losses resulting from Ground Lease Tenant's failure to do the same. Notwithstanding the foregoing, LACMTA agrees to (a) work in good faith with Ground Lease Tenant and Developer to reach an agreement on the forms of separate Lease Riders amending the Ground Lease for the benefit of TCAC and, if applicable, HCD, as is reasonably required by either party in connection with an award of tax credits or other financing for the Project; and (b) upon reaching agreement on a particular form for each Lease Rider, to allow such Lease Rider, once executed, to be recorded against the fee interest in the Premises.
4.20 FEDERAL CIVIL RIGHTS COVENANTS:	Ground Lease Tenant shall comply with all applicable Federal nondiscrimination requirements, including applicable sections of Title 49 of the Code of Federal Regulations.
4.21 TRANSFERS, ASSIGNMENT, & SUBLETTING:	Except for limited permitted exceptions to be set forth in the Ground Lease, Ground Lease Tenant shall not transfer, assign or sublet (except for the typical subleasing of the apartments and commercial space within the Project) its rights or obligations under the Ground Lease, or any beneficial interests in Ground Lease Tenant (each, a " <b>Transfer</b> "):
	a. Prior to Completion of the Project; and
	b. After Completion of the Project, except in accordance with reasonable transfer criteria (including, without limitation, criteria regarding the creditworthiness and experience of any proposed transferee and its affiliates and applicable Federal and State approvals and provisions regarding debarment and suspension) to be negotiated by LACMTA and Ground Lease Tenant and included in the Ground Lease.

Notwithstanding the foregoing, the Ground Lease will allow Ground Lease Tenant to make certain "Permitted Transfers" without LACMTA's consent; provided that (a) Ground Lease Tenant is not in breach or default under the Ground Lease. (b) Ground Lease Tenant provides written notice to LACMTA of Ground Lease Tenant's intent to effectuate a Permitted Transfer in accordance with time frames set forth in the Ground Lease and with sufficient detail for LACMTA to reasonably determine that the intended Transfer is a Permitted Transfer, (c) Ground Lease Tenant provides written notice to LACMTA of the consummation of the Transfer in accordance with time frames set forth in the Ground Lease and with sufficient detail for LACMTA to reasonably determine that the Transfer was a Permitted Transfer, (d) the Permitted Transfer complies fully with all applicable provisions of the Ground Lease, (e) no Permitted Transfer shall release Ground Lease Tenant from any part of its obligations under the Ground Lease, except as expressly set forth in the Ground Lease, and (f) no such Permitted Transfer shall result in a Change of Control, except as expressly permitted in the Ground Lease. Subject to the conditions set forth in the previous sentence, Permitted Transfers shall include: (i) a transfer of the initial limited partnership interest in Ground Lease Tenant to an investor limited partner and the subsequent transfer of such investor's limited partnership interest in Ground Lease Tenant to another investor or an affiliate of Ground Lease Tenant (even if such transfer constitutes a Change of Control), (ii) the transfer of Ground Lease Tenant's interest to an affiliate of Ground Lease Tenant (which LACMTA and Ground Lease Tenant acknowledge could result in a Change of Control), and (iii) the replacement of Ground Lease Tenant's general partner for cause with an affiliate of the limited partner in accordance with the terms of Ground Lease Tenant's partnership agreement (which LACMTA and Ground Lease Tenant acknowledge will result in a Change of Control), provided that in each case such investor or affiliate meets certain transferee requirements set forth in the Ground Lease. "Change of Control" means (a) a change in the identity of the entity with the power to direct or cause the direction of the management and policies of Ground Lease Tenant, whether through the ownership of voting securities, by contract or otherwise, or (b) the transfer, directly or indirectly, of fifty percent (50%) or more of the beneficial ownership interest in Ground Lease Tenant. Notwithstanding the foregoing, the Ground Lease will authorize and preapprove the withdrawal of BRIDGE Housing Corporation (or its affiliated general partner) as a general partner of Ground Lease Tenant, upon the one year anniversary of the conversion of the Project's initial construction financing to permanent financing.

**4.22 RETAINED RIGHTS:** LACMTA shall retain from the rights granted to Ground Lease Tenant under the Ground Lease certain rights as shall be further

described in detail in the Ground Lease, relating to the following: (1) the right to install, construct, inspect, operate, maintain repair, expand and replace Public Transit Facilities in, on, under, over, and adjacent to the Premises as LACMTA may deem necessary; (2) the right to use that portion of the Premises forming a portion of the Soto Station Plaza for LACMTA and public pedestrian ingress and egress; (3) the right to install, use, repair, maintain, and replace along the perimeter of the Premises abutting the Soto Station Plaza, public streets, sidewalks and/or rights-of-way (including, without limitation, on the exterior of the Project's buildings) (a) lighting, security cameras, and related conduit, cable, wiring and other appurtenances related to the Soto Station Plaza and the operation of the Metro L Line (formerly, the Metro Gold Line). (b) informational, directional and way-finding signs for the purpose of directing the public to, from and between LACMTA transit options and other public transit options in the area; provided, however, LACMTA shall not install any such signage, lighting, security cameras, conduit, cable, wiring or appurtenances on the Premises or the Project without Ground Lease Tenant's prior written approval, which shall not be unreasonably withheld, conditioned or delayed; (4) the right to enter upon and inspect the Premises, with reasonable notice to Ground Lease Tenant, and anytime during normal business hours for purposes of conducting normal and periodic inspections of the Premises and the Project and to confirm Ground Lease Tenant's compliance with the terms and conditions of the Ground Lease; and (5) all rights not explicitly granted to Ground Lease Tenant in the Ground Lease (the "Retained Rights"). The Retained Rights shall, among other things, ensure that the Premises remain available for the transit purposes originally authorized by the LACMTA's Federal and the State funding partners ("LACMTA's Satisfactory Continuing **Control Requirement**"). In exercising the Retained Rights, LACMTA shall use, good faith efforts to coordinate any construction, repair, maintenance or similar activities with Ground Lease Tenant so as to minimize the impact of such activities on each of Ground Lease Tenant's and Ground Lease Tenant's und

	subtenants' usage of the Premises in accordance with the Ground Lease.
4.23 ADDITIONAL MITIGATION	
MEASURES:	In addition to the mitigation measures required by the City of Los Angeles pursuant to its CEQA review of the Project, Ground Lease Tenant shall perform the additional mitigation measures set forth on <u>Exhibit 7</u> attached hereto during the Construction Period.
4.24 COMMERCIAL SPACE	
LEASING:	Ground Lease Tenant shall use commercially reasonable efforts

for the Project's commercial space.

to target community serving uses and/or local small businesses

4.25 OTHER:	Other customary and relevant provisions contained in other recent LACMTA ground leases will be included in the Ground Lease, including, without limitation, (a) LACMTA's standard transit proximity risk waiver, assumption of risk and indemnity language related to the Project's proximity to rail and other transit operations and infrastructure and (b) provisions relating to insurance and indemnity.
5. LACMTA Costs	
5.1 LACMTA COSTS:	Developer and Ground Lease Tenant acknowledge and agree that LACMTA will incur certain actual costs (the "LACMTA Costs") related to (a) the design, development, planning, and construction of the Project (including costs related to construction methods and logistics) and (b) negotiation of the terms and conditions of the transactions contemplated under the JDA and the Ground Lease. The LACMTA Costs shall include, without limitation, the actual cost of in-house staff time (including LACMTA overhead and administrative costs) and third party consultation fees (including, but not limited to, fees related to legal counsel, consultants, engineers, architects, and advisors) for financial analyses, design review (including reviewing plans and specifications for the Project and engineering and other reports related to the Project), negotiations, appraisals, document preparation, services related to development, planning, engineering, construction safety, construction management, construction support, and construction logistics, oversight and inspection, and other reasonable services related to the Project and the transactions contemplated under the JDA and Ground Lease, <i>but shall exclude</i> the cost of LACMTA Joint Development staff, and LACMTA's in-house and outside legal counsel with respect to negotiation and preparation of the JDA, Ground Lease and related transaction documents.
5.2 JDA DEPOSIT/ENA	
DEPOSIT REDUCTION:	Developer shall provide a deposit to LACMTA under the JDA for LACMTA to apply to LACMTA Costs (whether accruing prior to or after the JDA Commencement Date) (the " <b>Deposit</b> "). On the JDA Commencement Date, Developer shall pay LACMTA an initial Deposit amount of \$25,000 and the parties shall execute an amendment to the ENA that will reduce the deposit required thereunder from \$50,000 to \$25,000, and will change the ENA's deposit replenishment requirement to require replenishment of the ENA deposit to \$25,000 (instead of \$50,000), whenever the balance reaches \$10,000 or less (instead of \$25,000 or less). Any unspent ENA deposit funds held by LACMTA at the time of JDA execution that are in excess of \$25,000 shall be applied towards the \$25,000 initial JDA's Deposit. In the event the JDA's Deposit is not fully utilized by LACMTA in connection with the Project during the term of the JDA, then to the extent the Ground Lease is

executed, any remaining balance will be applied toward the Deposit due under the Ground Lease pursuant to <u>Section 5.3</u>, otherwise the remaining balance will be returned to Developer. LACMTA staff will provide documentation of the LACMTA Costs under the JDA to Developer upon request, provided that the form of documentation is available to LACMTA and in its possession, in LACMTA's sole good faith determination. During the term of the JDA, whenever the JDA's Deposit balance reaches \$10,000 or less, Developer will replenish the JDA's Deposit to \$25,000, upon written notice from LACMTA. If Developer does not replenish the JDA's Deposit at the applicable times as set forth herein, LACMTA may decline to provide the services that are to be covered by such Deposit and/or terminate the JDA.

5.3 GROUND LEASE DEPOSIT: Ground Lease Tenant shall pay LACMTA an initial Deposit amount of \$50,000 under the Ground Lease on the Commencement Date to cover LACMTA Costs associated with the initial construction of the Project. To the extent that the such Deposit is not utilized by LACMTA in connection with the initial construction of the Project, any remaining balance will be returned to Ground Lease Tenant upon Completion of the Project. Ground Lease Tenant will provide LACMTA with additional Deposit funds under the Ground Lease, in an amount to be determined at the time, for LACMTA Costs accruing during the Ground Lease Term in connection with future Ground Lease Tenant improvements requiring LACMTA review/approval. During the Ground Lease Term, whenever the Ground Lease's Deposit balance related to the initial construction of the Project reaches \$10,000 or less. Ground Lease Tenant will replenish such Deposit to \$50,000. upon written notice from LACMTA. If Ground Lease Tenant does not replenish the Ground Lease's Deposit at the applicable times as set forth herein, LACMTA may decline to provide the services that are to be covered by such Deposit and/or terminate the Ground Lease.





#### Exhibit 2

#### UNIT MIX

Apartment Type	Studio	1 BR	2BR	3BR	Total
Restricted to households earning up to 30% of AMI	-	2*	2	2	6*
Restricted to formerly homeless households earning up to 30% of AMI (with Project Based Vouchers)	13	7	-	-	20
Restricted to households earning up to 40% of AMI	-	4	6+	7	17+
Restricted to households earning up to 50% of AMI	-	3	6	6	15
Restricted to households earning up to 60% AMI		<u>2</u>	<u>2</u>	<u>1</u>	<u>5</u>
Unrestricted for Property Manager			<u>1</u>	<u>_</u>	<u>1</u>
Total	13	18*	17+	16	64*+

<sup>\*</sup> The total number of one-bedroom apartments restricted to households earning up to 30% of AMI could be reduced to one (1), if Developer determines (and demonstrates to the reasonable satisfaction of LACMTA) that such reduction is necessary for the Project to be financially feasible. This would also reduce the total number of apartments restricted to households earning up to 30% of AMI to five (5), and the total number of one-bedroom apartments in the Project to seventeen (17), and would reduce the total number of apartments in the Project by one (1).

<sup>+</sup> The total number of two-bedroom apartments restricted to households earning up to 40% of AMI could be reduced to five (5), if Developer determines (and demonstrates to the reasonable satisfaction of LACMTA) that such reduction is necessary for the Project to be financially feasible. This would also reduce the total number of apartments restricted to households earning up to 40% of AMI to sixteen (16) and the total number of two-bedroom apartments in the Project to sixteen (16) and would reduce the total number of apartments in the Project by one (1).

#### Exhibit 3

#### LIST OF PLANS AND SPECIFICATIONS COMPRISING THE ENTITLEMENT PACKAGE PLANS

Sheet	Sheet name	Issue name	Issue date	Plot date
number				

GENERAL				
G0.00	COVER SHEET	REVISED ENTITLEMENT	03/01/2019	None
		SUBMITTAL		
G0.01	GENERAL PROJECT	REVISED ENTITLEMENT	03/01/2019	3/4/2019
	INFORMATION	SUBMITTAL		
G0.02	GENERAL PROJECT	REVISED ENTITLEMENT	03/01/2019	2/28/2019
	INFORMATION	SUBMITTAL		
G1.01	BUILDING CODE ANALYSIS	REVISED ENTITLEMENT	03/01/2019	2/28/2019
	– OPEN SPACE	SUBMITTAL		
G1.01A	SUPPLEMENTAL	REVISED ENTITLEMENT	03/01/2019	2/28/2019
	SECTIONS	SUBMITTAL		
G1.01B	SUPPLEMENTAL VIEWS	REVISED ENTITLEMENT	03/01/2019	2/28/2019
		SUBMITTAL		
CIVIL				
C1.01	TITLE SHEET	100% DD	12/14/2018	None
C2.01	TYPICAL DETAILS	100% DD	12/14/2018	None
C3.01	DEMOLITION PLAN	100% DD	12/14/2018	None
C4.01	GRADING PLAN	100% DD	12/14/2018	None
C5.01	UTILITY PLAN	100% DD	12/14/2018	None
C6.01	EROSION CONTROL PLAN	100% DD	12/14/2018	None
LANDSCAPE				
L0.00	TITLE SHEET	100% DD	12/14/2018	12/14/2018
L1.00	MATERIAL & FURNISHING	100% DD	12/14/2018	12/14/2018
	SCHEDULE			
L1.01	PLAZA PLAN	100% DD	12/14/2018	12/14/2018
L1.02	L1 PLAN	100% DD	12/14/2018	12/14/2018
L1.03	L5 PLAN	100% DD	12/14/2018	12/14/2018
L1.10	COURTYARD	100% DD	12/14/2018	12/14/2018
	ENLARGEMENT PLAN			
L1.11	COURTYARD	100% DD	12/14/2018	12/14/2018
	ENLARGEMENT PLAN			
L2.00	SECTIONS	100% DD	12/14/2018	12/14/2018

L2.01	SECTIONS	100% DD	12/14/2018	12/14/2018
L2.10	DETAILS	100% DD	12/14/2018	12/14/2018
L2.11	DETAILS	100% DD	12/14/2018	12/14/2018
L3.00	IRRIGATION LEGEND &	100% DD	12/14/2018	12/14/2018
	NOTES			
L4.00	PLANTING SCHEDULE	100% DD	12/14/2018	12/14/2018
L4.01	PLAZA PLANTING PLAN	100% DD	12/14/2018	12/14/2018
L4.02	L1 PLANTING PLAN	100% DD	12/14/2018	12/14/2018
L4.03	L5 PLANTING PLAN	100% DD	12/14/2018	12/14/2018
ARCHITE				
A1.01	SITE PLAN	REVISED ENTITLEMENT SUBMITTAL	03/01/2019	2/28/2019
A1.05	STREET IMPROVEMENT PLAN	REVISED ENTITLEMENT	03/01/2019	2/28/2019
A2.00	PARKING FLOOR PLAN	REVISED ENTITLEMENT	03/01/2019	2/28/2019
A2.10	FIRST FLOOR PLAN	REVISED ENTITLEMENT	03/01/2019	2/28/2019
A2.20	SECOND FLOOR PLAN	REVISED ENTITLEMENT SUBMITTAL	03/01/2019	2/28/2019
A2.30	THIRD FLOOR PLAN	REVISED ENTITLEMENT SUBMITTAL	03/01/2019	2/28/2019
A2.40	FOURTH FLOOR PLAN	REVISED ENTITLEMENT SUBMITTAL	03/01/2019	2/28/2019
A2.50	FIFTH FLOOR PLAN	REVISED ENTITLEMENT SUBMITTAL	03/01/2019	2/28/2019
A2.60	ROOF PLAN	REVISED ENTITLEMENT SUBMITTAL	03/01/2019	2/28/2019
A3.01	EXTERIOR ELEVATIONS	REVISED ENTITLEMENT SUBMITTAL	03/01/2019	2/28/2019
A3.02	EXTERIOR ELEVATIONS	REVISED ENTITLEMENT SUBMITTAL	03/01/2019	2/28/2019
A4.01	BUILDING SECTIONS	REVISED ENTITLEMENT SUBMITTAL	03/01/2019	2/28/2019
A4.02	BUILDING SECTIONS	REVISED ENTITLEMENT SUBMITTAL	03/01/2019	2/28/2019
A4.03	BUILDING SECTIONS	REVISED ENTITLEMENT SUBMITTAL	03/01/2019	2/28/2019
R1.01	NW PERSPECTIVE	REVISED ENTITLEMENT SUBMITTAL	03/01/2019	None
R1.02	NE PERSPECTIVE	REVISED ENTITLEMENT SUBMITTAL	03/01/2019	None
R1.03	SE PERSPECTIVE	REVISED ENTITLEMENT	03/01/2019	None
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		SUBMITTAL		
R1.04	S. PERSPECTIVE	REVISED ENTITLEMENT	03/01/2019	None
		SUBMITTAL		
R1.05	E. PERSPECTIVE	REVISED ENTITLEMENT	03/01/2019	None
		SUBMITTAL		

#### LIST OF PLANS AND SPECIFICATIONS COMPRISING THE CONSTRUCTION DOCUMENT PROGRESS PLANS AND THE SOTO STATION PLAZA CONCEPTUAL PLANS

### Construction Document Progress Plans

- A. General Project Information Backcheck set dated March 2020; Plot date 4/15/2020;
- B. Civil Plans Backcheck set dated March 2020;
- C. Landscape Plans Backcheck set dated March 2020; Plot date 10/10/2019;
- D. Architectural Plans Backcheck set dated March 2020; Plot date 4/1/2020;
- E. Structural Plans Plan Check Submittal set dated December 2019; Plot date 7/2/2020;
- F. Temporary Shoring Plans dated 4/10/2020;
- G. Mechanical Plans Plan Check Submittal set dated December 2019; Plot date 2/25/2020;
- H. Plumbing Plans dated December 2019; Plot date 4/2/20;
- I. Electrical Plans Plan Check Submittal set dated December 2019; Plot date 4/6/2020;
- J. Solar Hot Water Plans Updated Background set dated 3/16/20;
- K. Exterior Building Maintenance Plans Issued for Coordination set dated 11/21/2019;
- L. Methane Gas Control System Plans dated July 2020; and
- M. Project Manual Los Lirios Mixed Use, dated 1/20/2020.

# The Soto Station Plaza Conceptual Plans

Los Lirios Plaza Update plans dated 11/4/2020

#### OUTREACH PLAN

Except as set forth in the following sentence, Developer has completed its primary outreach for the Project, including its outreach to the LACMTA-established Boyle Heights Joint Development Design Review Advisory Committee ("**DRAC**"), and the BHNC Planning and Land Use Committee ("**BHNC PLUC**"), which included Project updates to the DRAC and the BHNC PLUC in December 2020. Developer will provide a project update to the Boyle Heights Neighborhood Council ("**BHNC**") in the first quarter of 2021.

Further outreach will be completed pursuant to the City of Los Angeles' Marketing Requirements included in Los Angeles City Ordinance Number 186701, which sets forth the City of Los Angeles' final entitlement approvals for the Project. This outreach will include advertising in local and language-specific newspapers and other media, visible signage at the Project site and at a nearby lease-up office, as well as ELACC marketing emails and social media posts, in advance of lease-up of the Project's income-restricted, affordable housing units. The purpose of this outreach is to notify the Boyle Heights community of application availability and deadlines, as well as provide guidance and assistance in securing applications via mail, in person, or the internet.

Starting at least three (3) months prior to Completion of the Project, Developer will start a marketing and outreach campaign to target and solicit local, community-based businesses and organizations that may be interested in leasing the Project's 2,440 square foot commercial space.

Project updates will also be provided to the DRAC, BHNC PLUC and BHNC regarding substantial changes to the Project from that included in prior outreach efforts (if any).

# PLAT DETAILING CERTAIN SOTO STATION PLAZA MAINTENANCE RESPONSIBILITIES

(Attached)



11/4/20

#### ADDITIONAL MITIGATION MEASURES

LACMTA requires that the following mitigation measures be implemented by Ground Lease Tenant in addition to those specified in the Sustainable Communities Environmental Assessment prepared for the Project (City of Los Angeles Department of City Planning Case No. ENV-2019-2314-SCEA) (the "**SCEA**"):

- Prior to any Project-related earth-moving activity, Ground Lease Tenant shall retain the services of a vertebrate paleontologist approved by the Natural History Museum of Los Angeles County Vertebrate Paleontology Section (the "Approved Paleontologist") to manage a paleontologic resource impact mitigation program in support of any earth-moving activities associated with construction.
- Ground Lease Tenant shall provide LACMTA with a report from the Approved Paleontologist that indicates such Approved Paleontologist's determination whether construction of the Project has the potential, with respect to the soil on the Premises, to require excavation or blasting of parent material in older alluvium or in any younger alluvium lying below the uppermost five feet of such alluvium.
- 3. Where avoidance of parent material in older alluvium and in any younger alluvium lying below the uppermost five feet of such alluvium is not feasible, Ground Lease Tenant shall:
  - 3.1. Ensure that all on-site construction personnel receive Worker Education and Awareness Program (WEAP) training that (a) educates such personnel in the regulatory framework that provides for protection of paleontological resources, and (b) provides such personnel with a familiarity with the diagnostic characteristics of the materials with the potential to be encountered and the appropriate procedures to be implemented if fossil remains are uncovered by earth-moving activities.
  - 3.2. Ensure that the Approved Paleontologist prepares a Paleontological Resource Management Plan ("**PRMP**") to guide the salvage, documentation and repository of representative samples of unique paleontological resources encountered during construction.
  - 3.3. Ensure that the Approved Paleontologist oversees the implementation of the PRMP, if unique paleontological resources are encountered during any excavation or blasting activities on the Premises.
  - 3.4. Monitor blasting and earth-moving activities in older alluvium and in any younger alluvium lying below the uppermost five feet of such alluvium using a qualified paleontologist or an archeologist that is cross-trained in paleontology (the "**Monitor**") to determine if unique paleontological resources are encountered during any excavation or blasting activities, consistent with the Approved Paleontologist's specified protocols or other comparable protocols.
  - 3.5. Ensure that the Monitor recovers fossil remains uncovered by earth-moving activities.
  - 3.6. Ensure that the Monitor records associated specimen/sample data (taxon, element) and corresponding geologic (stratigraphic rock unit, stratigraphic level, lithology) and

geographic site data (location, depth), and will plot site locations on maps of the study area.

- 3.7. Ensure that all identifiable fossil remains are fully treated and that such treatment includes preparation of the remains by a paleontologic technician to the point of identification; identification to the lowest taxonomic level possible by knowledgeable paleontologists; curating and cataloguing the remains, plotting fossil site locations on maps of the study area, and entry of associated specimen data and corresponding geologic and geographic site data into appropriate computerized data bases by the technician; placement of the remains in the appropriate museum repository fossil collection for permanent storage and maintenance; and archiving of all associated data at the appropriate museum repository, where the data, along with the fossil remains, will be made available for future study by qualified scientific investigators. (Vertebrate and invertebrate fossil remains will be placed in the Natural History Museum of Los Angeles County's Vertebrate Paleontology and Invertebrate Paleontology Sections, respectively. Fossil plant remains will be placed in the University of California Museum of Paleontology.)
- 3.8. Ensure that the Approved Paleontologist prepares a comprehensive final report of results and findings that describes study area geology/stratigraphy, summarizes field and laboratory methods used, includes a faunal list and an inventory of curated/catalogued fossil remains, evaluates the scientific importance of the remains, and discusses the relationship of any newly recorded fossil site in the study area to relevant fossil sites previously recorded from other areas.
- 4. Prior to commencement of any construction, Ground Lease Tenant shall retain a qualified archaeologist meeting the Secretary of Interior's Professional Qualifications Standards for archaeology to (a) prepare a Cultural Resources Monitoring and Treatment Plan for known and unknown resources that are eligible or potentially eligible for the California Register or are unique archaeological resources; (b) oversee any archaeological monitors proposed in the plan; and (c) implement RCM CUL-1 as set forth in the SCEA.



# **City of Los Angeles**

Department of City Planning City Hall • 200 N. Spring Street, Room 621 • Los Angeles, CA 90012

# SUSTAINABLE COMMUNITIES ENVIRONMENTAL ASSESSMENT

# Los Lirios Mixed-Use Project

Boyle Heights Community Plan Area Case Number: ENV-2019-2314-SCEA

Project Location: 111-121 S. Soto Street and 2316-2328 E. 1st Street, Los Angeles, CA 90033

Council District: 14 – José Huizar

**Project Description:** The Project proposes the development of a 5-story, 64.5-foot high mixed-use affordable housing building consisting 63-affordable units and one-market rate manager's unit, 2,443 square feet of ground floor commercial space, and 50 total automobile parking spaces in a one level subterranean parking garage. The Project Site is 47,239 square feet (1.08 acres) in size and would include approximately 77,945 square feet of building area and a floor-area ratio (FAR) of 1.65 to 1. The Project would not require the demolition of any existing structures. However, part of the Project Site is within the Metro Soto Station Plaza, with which the Project would be integrated. Developments within the vicinity of the Project Site consist primarily of single-family and multi-family residences, and commercial uses along E. 1st Street. The Project Site is accessible by E. 1st Street, with a street designation of Avenue II, S. Soto Street, with a street designation of Avenue II, and is located approximately four blocks east of the US-5 Freeway. To allow for the proposed development, the Project Applicant is requesting the following discretionary approvals: (1) A General Plan Amendment per LAMC Section 11.5.6 to change the Land Use Designation from Low Medium II to Highway Oriented Commercial/Limited Commercial; (2) A JJJ complaint Vesting Zone Change per LAMC Section 12.32(Q) from C2-1-CUGU and RD1.5-1-CUGU to [T][Q]C2-1-1CUGU; (3) Utilizing Developer Incentives per LAMC Section 11.5.11(e), to allow: Rear Yard Reduction to 8' in lieu of 17', FAR Increase to 1.65:1 in lieu of 1.5:1, and Parking at 0.5 Spaces Per Unit, including 40% compact; (4) A Site Plan Review per LAMC Section 16.05; (5) Adoption of the SCEA; and (6) Approval of other permits, ministerial or discretionary, as maybe be necessary.

APPLICANT: East LA Community Corporation 2917 E. 1<sup>st</sup> Street Los Angeles, CA 90033 **PREPARED BY:** Rincon Consultants, Inc. **PREPARED FOR:** 

City of Los Angeles Department of City Planning 200 N. Spring Street, Room 621 Los Angeles, CA 90012

March 2020

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- Appendix B: Historic Records Search
- Appendix C: Air Quality and Noise Report
- Appendix D: Transportation Impact Study
- Appendix E: Greenhouse Gas Data
- Appendix F: Geotechnical Investigation
- Appendix G: Phase I Environmental Site Assessment
- Appendix H: Service Letters
- Appendix I: Native American Heritage Commission Sacred Lands File
- Appendix J: Supplemental VMT Analysis

This Sustainable Communities Environmental Assessment (SCEA) has been prepared pursuant to Section 21155.2 of the California Public Resources Code.

#### 1. **PROJECT INFORMATION**

Project Title:	Los Lirios Mixed-Use Project
Project Applicant:	East LA Community Corporation 2917 E. 1 <sup>st</sup> Street Los Angeles, CA 90033
Project Location:	111-121 S. Soto Street and 2316-2328 E. 1 <sup>st</sup> Street, Los Angeles, CA 90033
Lead Agency:	City of Los Angeles Department of City Planning 200 N. Spring Street, Room 621 Los Angeles, CA 90012
City Staff Contact:	Hagu Solomon-Cary (213) 978-1361

# 2. PROJECT SUMMARY

The subject of this SCEA is the proposed Los Lirios Mixed-Use Project (Project). The Project is located on an approximately 47,239 square-foot (1.08 acres) site (Project Site) in the Boyle Heights Community Plan area of the City of Los Angeles (City). The Project Site is located at 111-121 S. Soto Street and 2316-2328 E. 1<sup>st</sup> Street, and is comprised of six parcels with Assessor Parcel Numbers (APNs) 5183-009-904, 905, 906, 907, 909, and 910. The Project Site includes the Metro Soto Station Plaza at the southwest corner of 1st Street and Soto Street. The Project Site is also surrounded by residences to the south, residences and commercial uses to the west across an alley, residences to the east across S. Soto Street, and residences and commercial uses to the north across E. 1<sup>st</sup> Street.

The Project proposes the development of a five-story, 64.5-foot high mixed-use affordable housing building consisting 63 affordable units and one market rate manager's unit, and 2,443 square feet of ground floor commercial space. In total, the Project would include approximately 77,945 square feet of building area with a Floor Area Ratio (FAR) of 1.65 to 1. Additionally, the Project would provide approximately 8,171 square feet of open space including a central courtyard, community terrace, roof terrace, community room, exercise room, and private balconies. The Project would provide 50 vehicle parking spaces within one subterranean level. A total of 66 bicycle parking spaces would be provided onsite, including 54 long term and 12 short-term spaces. Vehicle access to the subterranean garage and loading area would be from one entrance along the existing alley adjacent to the Project Site.

To allow for the proposed development, the Project Applicant is requesting the following discretionary approvals:

1. A General Plan Amendment per Los Angeles Municipal Code (LAMC) Section 11.5.6 to change the Land Use Designation from Low Medium II to Highway Oriented Commercial/Limited Commercial;

- A JJJ complaint Vesting Zone Change per LAMC Section 12.32(Q) from C2-1-CUGU and RD1.5-1-CUGU to [T][Q]C2-1-1CUGU;
- 3. Utilizing Developer Incentives per LAMC Section 11.5.11(e), to allow: Rear Yard Reduction to 8' in lieu of 17', FAR Increase to 1.65:1 in lieu of 1.5:1, and Parking at 0.5 Spaces Per Unit, including 40% compact;
- 4. A Site Plan Review per LAMC Section 16.05;
- 5. Adoption of the SCEA; and
- 6. Approval of other permits, ministerial or discretionary, as necessary.

# 3. BACKGROUND INFORMATION ON SENATE BILL 375 AND SCEA

The State of California adopted Senate Bill 375 (SB 375), also known as "The Sustainable Communities and Climate Protection Act of 2008," which outlines growth strategies that better integrate regional land use and transportation planning and that help meet the State of California's greenhouse gas (GHG) emissions reduction mandates. SB 375 requires the State's 18 metropolitan planning organizations to incorporate a "sustainable communities strategy" (SCS) into the regional transportation plans to achieve their respective region's greenhouse gas emission reduction targets set by CARB. Correspondingly, SB 375 provides various California Environmental Quality Act (CEQA) streamlining provisions for projects that are consistent with an adopted applicable SCS and meet certain objective criteria; one such CEQA streamlining tools is the SCEA.

The Southern California Association of Governments (SCAG) is the metropolitan planning organization for the County of Los Angeles (along with the Counties of Imperial, San Bernardino, Riverside, Orange, and Ventura). On April 7, 2016, SCAG's Regional Council adopted the 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (2016–2040 RTP/SCS). For the SCAG region, CARB has set GHG emissions reduction targets at 8 percent below 2005 per capita emissions levels by 2020, and 13 percent below 2005 per capita emissions levels by 2035. The 2016–2040 RTP/SCS outlines strategies to meet or exceed the targets set by CARB. By Executive Order, approved June 28, 2016, CARB officially determined that the 2016–2040 RTP/SCS would achieve CARB's 2020 and 2035 GHG emission reduction targets.

SB 375 allows the City, acting as lead agency, to prepare a SCEA as the environmental CEQA Clearance for "transit priority projects" (as described below) that are consistent with SCAG's 2016–2040 RTP/SCS.

# 4. TRANSIT PRIORITY PROJECT CRITERIA

SB 375 provides CEQA streamlining benefits to qualifying transit priority projects (TPPs). For purposes of projects in the SCAG region, a qualifying TPP is a project that meets the following four criteria (see PRC Section 21155 (a) and (b)):

- 1. Is consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in the SCAG 2016–2040 RTP/SCS;
- Contains at least 50 percent residential use, based on total building square footage and, if the project contains between 26 percent and 50 percent nonresidential uses, a floor area ratio of not less than 0.75;
- 3. Provides a minimum net density of at least 20 dwelling units per acre; and

4. Is within one-half mile of a major transit stop or high-quality transit corridor included in a regional transportation plan.

# 5. SCEA PROCESS AND STREAMLINING PROVISIONS

Qualifying TPPs that have incorporated all feasible mitigation measures, performance standards or criteria set forth in the prior applicable EIR (SCAG's 2016–2040 RTP/SCS Program EIR) and that are determined to not result in significant and unavoidable environmental impacts may be approved with a SCEA. The specific substantive and procedural requirements for the approval of a SCEA include the following:

- 1. An initial study shall be prepared for a SCEA to identify all significant impacts or potentially significant impacts of the TPP, except for the following:
  - a. Growth-inducing impacts, and
  - b. Project-specific or cumulative impacts from cars and light trucks on global warming or the regional transportation network.
- 2. The initial study shall identify any cumulative impacts that have been adequately addressed and mitigated in a prior applicable certified EIR. Where the lead agency determines the impact has been adequately addressed and mitigated, the impact shall not be cumulatively considerable.
- 3. The SCEA shall contain mitigation measures that either avoid or mitigate to a level of insignificance all potentially significant or significant effects of the project required to be identified in the initial study.
- 4. A draft of the SCEA shall be circulated for a public comment period not less than 30 days, and the lead agency shall consider all comments received prior to acting on the SCEA.
- 5. The SCEA may be approved by the lead agency after the lead agency's legislative body (or any decision maker in any action authorized by Chapter 1 of the LAMC) conducts a public hearing, reviews comments received, and finds the following:
  - a. All potentially significant or significant effects required to be identified in the initial study have been identified and analyzed, and
  - b. With respect to each significant effect on the environment required to be identified in the initial study, either of the following apply:
    - i. Changes or alterations have been required in or incorporated into the project that avoid or mitigate the significant effects to a level of insignificance.
    - ii. Those changes or alterations are within the responsibility and jurisdiction of another public agency and have been, or can and should be, adopted by that other agency.
- 6. The lead agency's decision to review and approve a TPP with a SCEA shall be reviewed under the substantial evidence standard.

# 6. **REQUIRED FINDINGS**

• Based on a review of the entire administrative record, the City finds that preparation of a SCEA in accordance with PRC Sections 21155(a), 21155(b), 21155.2(a), 21155.2(b)(1), and 21155.2(b)(2), is appropriate for the Project for the following reasons: The State Air Resources Board, pursuant

to subparagraph (H) of paragraph (2) of subdivision (b) of Section 65080 of the Government Code, has accepted SCAG's determination that the sustainable communities strategy adopted by SCAG in the 2016-2040 RTP/SCS would achieve the greenhouse gas emission reduction targets.

- The Project is consistent with the general use designations, density, building intensity, and applicable policies specified for the Project area in SCAG's 2016–2040 RTP/SCS.
- The Project qualifies as a TPP pursuant to PRC Section 21155(b), as it contains more than 50 percent residential use; provides a minimum net density greater than 20 dwelling units per acre; and is within 0.5 mile of a major transit stop or high-quality transit corridor included in a regional transportation plan;
- The Project incorporates all feasible mitigation measures, performance standards, or criteria set forth in the prior applicable environmental impact reports and adopted findings made pursuant to PRC Section 21081, including the 2016–2040 RTP/SCS Program Environmental Impact Report (Program EIR);
- All potentially significant effects, significant effects, and potential cumulative effects required to be identified and analyzed pursuant to CEQA have been identified and analyzed in an initial study;
- With respect to each significant effect on the environment required to be identified in the initial study, changes or alterations have been required in or incorporated into the Project that avoid or mitigate the significant effects to a level of less than significant.

Upon circulation of the SCEA to the public, the Project will comply with PRC Section 21155.2(b)(3) and proceed through the SCEA process for compliance with PRC Sections 21155.2(b)(4) through 21155.2(b)(7).

# 7. ORGANIZATION OF THE SCEA

This SCEA is organized as follows:

**<u>I. Introduction</u>**: This section (above) provides introductory information about the Project.

**<u>II. Project Description</u>**: This section provides a detailed description of the proposed Project including the environmental setting, Project characteristics, related Project information, Project objectives, and environmental clearance requirements.

**III. SCEA Criteria and Transit Priority Project Consistency**: This section identified the Transit Priority Project Criteria and provides an analysis of the Project's consistency with the 2016–2040 RTP/SCS.

**IV. 2016-2040 RTP/SCS Program EIR Mitigation Measures:** This section identifies all feasible mitigation measures, performance standards, and criteria from the 2016–2040 RTP/SCS Program EIR.

**<u>V. Initial Study Checklist</u>**: This section contains the completed SCEA Initial Study Checklist showing the significance level under each environmental impact category.

<u>VI. Sustainable Communities Environmental Impact Analysis</u>: Each environmental issue identified in the Initial Study Checklist contains an assessment and discussion of Project-specific and cumulative impacts associated with each subject area. Where the evaluation identifies potentially significant effects, as identified on the Checklist, mitigation measures are provided to reduce such impacts to less-than-significant levels.

### 1. **PROJECT APPLICANT**

The Applicant for the Los Lirios Mixed-Use Project (Project) is the East LA Community Corporation (the Applicant).

# 2. ENVIRONMENTAL SETTING

#### A. Project Location

The Project Site is located at 111-121 S. Soto Street and 2316-2328 E. 1<sup>st</sup> Street in the City of Los Angeles. Figure II-1 illustrates the Project Site's location from a regional perspective and Figure II-2 shows the Project Site in a neighborhood context. The approximately 47,239 square-foot (1.08-acre) Project Site includes the at grade Metro Soto Station Plaza at the southwest corner of 1<sup>st</sup> Street and Soto Street. The Project Site is located in the Boyle Heights Community Plan Area of the City of Los Angeles, in Council District 14. Table II-1 lists the street addresses, Assessor's Parcel Numbers (APNs), and present land use associated with the Project Site and Figure II-2 illustrates the Project Site with associated APN's.

Project Site Location				
Street Number	Street Name	Assessor Parcel Number	Present Land Use	
119	S. Soto Street	5183-009-904	Vacant	
2316, 2318, 2320	E. 1 <sup>st</sup> Street	5183-009-905	Metro Soto Station Plaza	
2322, 2322 ½, 2324	E. 1 <sup>st</sup> Street	5183-009-906	Metro Soto Station Plaza	
121	S. Soto Street	5183-009-907	Vacant	
1	<sup>1</sup>	5183-009-909	Metro Soto Station	
113, 113 ½	S. Soto Street	5183-009-910	Metro Soto Station Plaza	
<sup>1</sup> APN 5183-009-909 contains the Metro Soto Station and is comprised of two separate lots (10 and 11). Lot 10 is addressed 2328 E. 1 <sup>st</sup> Street and Lot 11 is addressed 111 S. Soto Street.				

Table II-1
Project Site Location

#### Regional and Local Access

The Project Site is accessible by 1st Street with a street designation of Avenue II, Soto Street with a street designation of Avenue II and an alley and is located approximately four blocks east of the US-5 Freeway. Primary vehicular access to the Site is provided via a driveway on Soto Street.

#### Public Transit

The Project Site is an infill site within a Transit Priority Area (TPA) as defined by CEQA.<sup>1</sup> The roadways adjacent to the Project Site are served by several bus lines managed by the Los Angeles County

<sup>&</sup>lt;sup>1</sup> City of Los Angeles Department of City Planning, Zone Information & Map Access System, website: http://zimas.lacity.org, accessed: August 2019.

Metropolitan Transportation Authority (Metro). Specifically, the Project is served by Metro bus lines 30/330, 68, 106, 251, 252, 605, 751, and 770. The Project is also served by the City of Montebello municipal bus line 40. Moreover, the Project would be incorporated into the Metro Soto Station Plaza which provides service for the Metro Gold Line. Due to its proximity to the bus stops (1<sup>st</sup> and Soto station is located along the Project Site's northern boundary) and Metro Soto Station Plaza, the Project Site is easily accessible and highly connected with the City of Los Angeles and the greater Los Angeles area.

### B. Existing Conditions

There are no existing buildings on the project site, aside from the Soto Station terminal structure on APN: 5183-009-909, in the northeastern portion of the Project Site. The previous buildings on the vacant parcels (5183-009-904 and 5183-009-907) were demolished in 2004 – 2005. Figure II-2 presents an aerial view of the Project Site and photos of the existing conditions on the Site are shown in Appendix G (Phase I Environmental Site Assessment). The Project would be incorporated into the Metro Soto Station Plaza which provides service for the Metro Gold Line.

### C. Existing Zoning and Land Use Designations

As discussed previously, the Project Site is comprised of six contiguous parcels in the Boyle Heights Community Plan Area. Four of these parcels along  $1^{st}$  Street are zoned C2-1-CUGU (Commercial Zone – Height District No. 1 – Clean Up Green Up) with a Land Use Designation of Highway Oriented and Limited Commercial. Two of the six parcels front Soto Street and are zoned RD1.5-1-CUGU (Restricted Density Multiple Dwelling Zone – Height District No. 1 – Clean Up Green Up) with a Land Use Designation of Low Medium II Residential.

As part of the Project, the Applicant requests a General Plan Amendment per Los Angeles Municipal Code (LAMC) Section 11.5.6 to change the parcels designated as Low Medium II Residential to Highway Oriented Commercial/Limited Commercial. Additionally, the Applicant requests a JJJ compliant Vesting Zone Change per LAMC Section 12.32 Q to change the existing Project Site zones of C2-1-CUGU and RD1.5-1-CUGU to [T][Q]C2-1-CUGU. C2 Zone is permitted commercial uses listed in LAMC Section 12.14 and residential density of the R4 Zone per LAMC Section 12.11. Height District indicates that the Project Site does not have any height limit and is limited to a maximum FAR of 1.5:1, or 1.5 times the lot area. The Applicant requests a Developer's Incentive under Measure JJJ to allow a maximum FAR of 1.65:1 in lieu of 1.5:1.

Per the City's Zone Information & Map Access System (ZIMAS), the Project Site is located in a Methane Zone and is in the City's Bureau of Engineering (BOE) Special Grading Area. In addition, the Project Site is also within a Clean Up Green Up Supplemental Use (CUGU) District and would be required to comply with the provisions set forth in LAMC Section 13.18. The purpose of the CUGU District is to reduce cumulative health impacts resulting from land uses including, but not limited to, concentrated industrial land use, on-road vehicle travel, and heavily freight-dominated transportation corridors, which are incompatible with the sensitive uses to which they are in close proximity, such as homes, schools and other sensitive uses. The Proposed Project is a mixed-use development containing commercial and residential uses and does not include uses which would significantly increase cumulative health impacts and be considered incompatible with sensitive uses.

#### D. Surrounding Land Uses

The Project Site is also surrounded by adjacent residences to the south, residences and commercial uses to the west across an alleyway, residences to the east across Soto Street, and residences and commercial uses to the north across 1<sup>st</sup> Street. Photographs of surrounding land uses are shown in Appendix G (Phase I Environmental Site Assessment).

## **3. PROJECT CHARACTERISTICS**

#### A. Project Overview

The Project involves the development of a 5-story, 64.5-foot high mixed-use affordable housing building consisting 63-affordable units and 1-market rate manager's unit, 2,443 square feet of ground floor commercial space, and 50 total automobile parking spaces in a one level subterranean parking garage. The residential units would include 13 studios, 18 one-bedrooms, 17 two-bedrooms, and 16 three-bedrooms. The proposed approximately 77,945 square-foot building would be 5 stories and a maximum of 64.5 feet tall (71 feet to the top of stairs and elevator towers per LAMC 12.0). The Project would provide 66 bicycle parking spaces including 54 long term and 12 short term spaces. Additionally, the Project would provide approximately 8,171 square feet of open space including a central courtyard, community terrace, roof terrace, community room, exercise room, and private balconies. The Project's plans are shown on Figures II-3 through II-14.

#### Design and Architecture

The proposed building provides a variety of architectural materials, building planes and ground-level façade transparency, while also providing a pedestrian-scale street level. The design of the proposed building alternates different textures, colors, materials, and distinctive architectural treatments have been developed with the intent to add visual interest and avoid repetitive facades. Moreover, the proposed Project is designed and oriented to connect the Project Site with the Metro Soto Station Plaza as well as E. 1<sup>st</sup> Street and S. Soto Street.

#### Open Space and Landscaping

The distribution of open space throughout the Project Site at various orientations, scales, and levels is intended to create opportunities for a wider variety of activities and allow each space to be shared by a smaller group of residents for community engagement and interaction. Residential amenities offered throughout the Project include: central courtyard, community terrace, roof terrace, community room, exercise room, and private balconies. As shown in Figures II-13 and II-14, the Project would include hardscape improvements to the station's plaza (ex. new materials, furnishings, children's play features/equipment) and installation of 16 new trees (primarily via boxed plantings). See Table II-2for required and proposed open space square-footage.

Open Space Summary				
Land Use	Units	Open Space Requirement	Open Space Required (sf)	
Studio	13	100 sf/unit	1,300	
1-Bedroom	18	100 sf/unit	1,800	
2-Bedroom	17	125 sf/unit	2,125	
3-Bedroom	16	175 sf/unit	2,800	
Total Required Open Space		8,025		
Proposed Open Space		Open Space (sf)		
Central Courtyard		1,460		
Community Terrace		1,065		
Roof Terrace	1,840			
Community Room	2,245			
Exercise Room		610		
Private Balconies	1,800			
Total Provided Open Space	e 8,171			
sf = square feet				
Source: Gonzalez Goodale Architects, 2020.				

Table II-2 Open Space Summary

#### Sustainability Features

The proposed building would meet and/or exceed all City Building Code and Title 24 requirements. As such, the building would incorporate eco-friendly building materials, systems, and features wherever feasible, including Energy Star®-rated appliances, water saving/low-flow fixtures, non-volatile organic compound paints/adhesives, drought-tolerant planting, and high performance building envelopment.

As shown in Figure II-10, the project would implement approximately 1,152 square feet of solar panels on the roof of the mixed-use building. As shown in Figure II-3, the project would include electric vehicle charging systems (EVCS) as well as clean air and electric vehicle ready parking spaces in the subterranean parking garage.

#### B. Access and Parking

Access to the Project would be designed to be pedestrian-friendly and promote pedestrian access to the Project from the Metro Soto Station Plaza. Vehicle access to the Project and associated parking facility would be provided via the proposed driveway located on the east side of the alleyway along the westerly property frontage which can be accessed from E. 1<sup>st</sup> Street.

Parking for the Project would be provided in one level of subterranean parking. See Table II-3 for parking spaces required and provided by the Project. As shown, the Project will provide a total of 50 residential vehicle parking spaces and one exterior loading space at the southwestern corner of the Site.

Parking Summary				
Land Use	Parking Requirement	Units	Spaces Required	
Affordable Units	0.5 space/unit	63	32	
Manager's Unit	2 space/unit	1	2	
Commercial	2 spaces/1,000 sf	2,443 sf	5	
Parking Required		39		
Parking Provided		50		
sf = square feet				
Source: Gonzalez Goodale Architects, 2020.				

Table II-3 Parking Summary

To encourage and facilitate the use of public transportation and bicycle use by employees, residents, and visitors, the Project would include 66 bicycle parking spaces including 54 long term spaces and 12 short term spaces (See Table II-4).

Bicycle Parking Summary				
Type of Parking	Parking Requirement	Units	Spaces Required	
Residential				
	1 space/unit 1-25		25	
Long-Term	1 space/1.5 units	26-64	26	
	1 space/ 10 units	1-25	2.5	
Short-Term	1 space/15 units	26-64	2.6	
Commercial				
Long-Term	1 space/2,000 sf	2,443	2.1	
Short-Term	1 space/2,000 sf	2,443	2.1	
Bicycle Parking Required	53 Long Term + 7 Short Term			
Bicycle Parking Provided 54 Long Term + 12 Short Term			t Term	
sf = square feet				
Source: Gonzalez Goodale Architects, 2020.				

Table II-4 Bicycle Parking Summary

# C. Construction Details

The Project is anticipated to start construction in 2020, with operation beginning in 2021. Implementation of the project would require a cut of approximately 12,946 cubic yards of soil and 38 cubic yards of fill, resulting in a net export of 12,908 cubic yards. Because the Project Site is located in a City designated Bureau of Engineering (BOE) Special Grading Area, the Applicant would be required to prepare a proposed hauling route plan for review and approval by the Board of Building and Safety Commission.

# D. Project Design Feature

The Project Applicant would include the following project design feature (PDF) into the design and implementation of the Project that would reduce or negate potential impacts concerning hazardous conditions at the Project site.

#### Hazards PDF

To mitigate the potential risk of soil vapor intrusion into the proposed structure, the Project will incorporate a soil vapor mitigation technology into the design of the Project.

### 4. **PROJECT OBJECTIVES**

The objectives of the Project are as follows:

- To establish infill development providing housing on site to serve the local community in a manner consistent with the City's General Plan and Boyle Heights Community Plan;
- To provide a development that is compatible and complementary with surrounding land uses;
- To facilitate the redevelopment/improvement of six parcels which are currently partially vacant within a Transit Priority Area; and
- To provide multi-family affordable housing close to employment opportunities, urban amenities, and mass transit opportunities.

# 5. DISCRETIONARY ACTIONS AND APPROVALS

The Department of City Planning is the lead agency for the Project. In order to permit development of the Project, the City may require approval of one or more of the following discretionary actions:

- 1. Pursuant to LAMC Section 11.5.6, a Land Use Designation change from Low Medium II to Highway Oriented Commercial/Limited Commercial.
- 2. Pursuant to LAMC Section 12.32(Q), a Zone change from C2-1-CUGU and RD1.5-1-CUGU to [T][Q]C2-1-1CUGU.
- 3. Pursuant to LAMC Section 11.5.11(e), a Rear Yard Reduction to 8' in lieu of 17', FAR Increase to 1.65:1 in lieu of 1.5:1.
- 4. Pursuant to LAMC Section 11.5.11(e), Parking at 0.5 Spaces Per Unit, including 40% compact.
- 5. Pursuant to LAMC Section 16.05, a Site Plan Review
- 6. Adoption of the SCEA.
- 7. Demolition, grading, excavation, and building permits.
- 8. Other permits, ministerial or discretionary, as may be necessary pursuant to various sections of the LAMC from the City of Los Angeles Department of Building and Safety (and other municipal agencies) in order to execute and implement the Project. Such approvals may include, but are not limited to landscaping plan approvals, stormwater discharge permits, permits for temporary street closures, installation and hookup approvals for public utilities, haul route approvals, and related permits.

# 6. **RELATED PROJECTS**

State *CEQA Guidelines* Section 15063(b) requires that Initial Studies consider the environmental effects of a proposed project individually as well as cumulatively. Cumulative impacts are two or more individual

effects which, when considered together, are considerable or which compound or increase other environmental impacts (State *CEQA Guidelines* Section 15355). Cumulative impacts may be analyzed by considering a list of past, present, and probable future projects producing related or cumulative impacts (State *CEQA Guidelines* Section 15130[b][1][A]).

All proposed projects that could produce a related or cumulative impact on the local environment when considered in conjunction with the Project are included in this SCEA. For an analysis of the cumulative impacts associated with these related projects and the Project, cumulative impact discussions are provided under each individual environmental impact category in Section VI, Sustainable Communities Environmental Analysis.

Table II-5 lists 31 projects, including all proposed or reasonably foreseeable projects within the study area that are expected to be completed by the anticipated Project buildout and occupancy.

The list of related projects is not intended to be an exhaustive list of projects that may occur during the construction period, which cannot be known in an absolute way. Instead, the list is intended to demonstrate the reasonably anticipated magnitude of development that may occur in the study area during this period based on projects currently on file with appropriate local municipalities. Furthermore, the related projects list provides a conservative analysis as it is unlikely that all of the projects on the list will be developed due to various circumstances that could arise during the typical planning process. The locations of the related projects are shown on Figure II-15.

ID	Location	Status	Project Type	Size	
1	1510 N. San Pablo Street	Proposed	Medical Office	120,000	sf
			Research & Development	465,000	sf
2	2901 E. Olympic Boulevard	Proposed	Apartment	4,400	du
			Retail	185,000	Sf
			Office	125,000	sf
			Daycare Center	15,000	sf
			Library	15,000	sf
3	950 East 3rd Street	Proposed	Apartment	635	du
			Retail/Restaurant	30,062	sf
			School	532	stude
					nts
4	3401 E. 1st Street	Proposed	Apartment	49	du
-			Retail	10,000	sf
	963 E. 4th Street	Proposed	Office	78,600	sf
5			Retail	25,000	sf
			Restaurant	20,000	sf
	2051 E. 7th Street	Proposed	Apartments	320	du
6			Restaurant	5,000	sf
			Retail	15,000	sf
7	826 S. Mateo Street	Proposed	Condominium	90	du
			Retail	11,000	sf
			Restaurant	5,600	sf

Table II-5 List of Related Projects

Los Lirios Mixed-Use Project ENV-2019-2314-SCEA

		List of Related	110,000		
ID	Location	Status	Project Type	Size	
8	555 S. Mateo Street	Proposed	Retail	153,000	sf
9 2030 F 7th Street	2030 E. 7th Street	Proposed	Office	243,583	sf
			Retail	40,000	sf
10	540 S. Santa Fe Avenue	Proposed	Office	89,825	sf
11	1030 N. Soto Street	Proposed	Hotel	81	rooms
12	2407 E. 1 <sup>st</sup> Street	Proposed	Apartment	81	du
			Retail	5,000	sf
13	410 N. Center Street	Proposed	Office	110,000	sf
14	500 S. Mateo Street	Proposed	Restaurant	12,882	sf
15	2130 E. Violet Street	Proposed	Office	94,000	sf
15		Toposed	Retail	7,500	sf
16	929 E. 2nd Street	Proposed	Retail	37,974	sf
10		Порозец	Other	71,078	sf
			Apartment	77	du
17	2420 E. Cesar Chavez Avenue	Proposed	Bank	4,000	sf
			Health Club	4,000	sf
			Apartment	600	du
10	520 S. Mateo Street	Proposed	Office	30,000	sf
18			Retail	15,000	sf
			Restaurant	15,000	sf
	2650 E. Olympic Boulevard	Proposed	Apartment	1,030	du
			Office	219,258	sf
			Supermarket	31,285	sf
			High-Turnover Restaurant	26,070	sf
19			Drinking Place	15,642	sf
			Retail	15,642	sf
			Coffee Shop	2,607	sf
			Bank	2,607	sf
			Apartment	310	du
20	527 S. Colyton Street	Proposed	Retail	11,375	sf
			Office	11,736	sf
			Apartment	93	du
21	940 E. 4th Street	Proposed	Retail	14,248	sf
			Office	6,000	sf
22	806 E. 3rd Street	Proposed	Restaurant	18,327	sf
	640 S. Santa Fe Avenue	Proposed	Office	91,185	sf
23			Retail	9,430	sf
_			Restaurant	6.550	sf
	443 S. Soto Street	Proposed		.,	stude
24			Elementary School	625	nts

Table II-5					
List of	Related	Pro	jects		

Los Lirios Mixed-Use Project ENV-2019-2314-SCEA

ID	Location	Status	Project Type	Size	
25	2143 E. Violet Street	Proposed	Apartment	320	du
			Office	224,292	sf
			Retail	46,670	sf
26	676 S. Mateo Street	Proposed	Apartment	185	du
			Retail	27,280	sf
	1000 S. Santa Fe Avenue	Proposed	Market	14,193	sf
27			Health Club	6,793	sf
			Restaurant	10,065	sf
20	220 N. Center Street	Proposed	Apartment	430	du
28			Retail	8,742	sf
	810 E. 3rd Street	Proposed	Apartment	4	du
29			Restaurant	3,541	sf
			Retail	6,171	sf
	2110 Bay Street	Proposed	Apartment	99	du
20			Affordable Housing	11	du
30			Office	113,350	sf
			Retail	43,657	sf
	401 S. Hewitt Street	Proposed	Office	255,500	sf
31			Retail	4,970	sf
			Restaurant	9,940	sf
sf = square feet; du = dwelling units;					

		Table II	-5
List	of	Related	Projects

Source: Linscott Law & Greenspan, Transportation Impact Study, Los Lirios Mixed-Use Project (Appendix D).



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Los Lirios Mixed-Use Project ENV-2019-2314-SCEA





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Los Lirios Mixed-Use Project ENV-2019-2314-SCEA









Los Lirios Mixed-Use Projec ENV-2019-2314-SCEA







Los Lirios Mixed-Use Project ENV-2019-2314-SCEA






ENV-2019-2314-SCEA

### Figure II-13 Planting Plan





II. Project Description Rincon Consultants, Inc.

#### Figure II-15 Location of Related Projects



Los Lirios Mixed-Use Project ENV-2019-2314-SCEA II. Project Description Rincon Consultants, Inc.

### III. SCEA CRITERIA AND TRANSIT PRIORITY PROJECT CONSISTENCY ANALYSIS

### 1. SENATE BILL 375

The State of California adopted SB 375, The Sustainable Communities and Climate Protection Act of 2008, which outlines growth strategies that better integrate regional land use and transportation planning and that help meet the State of California's greenhouse gas reduction mandates. SB 375 requires the State's 18 metropolitan planning organizations to incorporate a "sustainable communities strategy" into the regional transportation plans to achieve their respective region's greenhouse gas emission reduction targets set by California Air Resources Board (CARB). The Southern California Association of Governments (SCAG) is the metropolitan planning organization that has jurisdiction over the Project Site.

For the SCAG region, pursuant to SB 375, CARB set greenhouse gas (GHG) emissions reduction targets that were updated in 2018 to an 8 percent reduction by 2020 and a 19 percent reduction by 2035 in per capita passenger vehicle GHG emissions, which became effective October 1, 2018.<sup>1</sup> On April 7, 2016, SCAG adopted the 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS): A Plan for Mobility, Accessibility, Sustainability, and a High Quality of Life. The 2016 RTP/SCS outlines strategies that meet or exceed these targets set by CARB.<sup>2</sup> On June 28, 2016, pursuant to California Government Code Section 65080(b)(2)(1), CARB accepted SCAG's determination that its 2016 RTP/SCS would, if implemented, achieve CARB's applicable GHG reduction targets.<sup>3</sup>

### 2. TRANSIT PRIORTY PROJECT CRITERIA

SB 375 provides CEQA streamlining benefits to transit priority projects (TPPs). A TPP is a project that meets the following four criteria (Public Resources Code [PRC] Section 21155 (a) and (b)):

- 1. Is consistent with the use designation, density, building intensity, and applicable policies specified for the project area in SCAG's 2016 RTP/SCS;
- Contains at least 50 percent residential use, based on total building square footage and, if the project contains between 26 percent and 50 percent nonresidential uses, a floor area ratio of not less than 0.75;
- 3. Provide a minimum net density of at least 20 units per acre; and
- 4. Is located within one-half mile of a major transit stop or high-quality transit corridor included in the 2016-2040 RTP/SCS.

<sup>&</sup>lt;sup>1</sup> California Air Resources Board, SB 375 Regional Plan Climate Targets, website: https://ww2.arb.ca.gov/ourwork/programs/sustainable-communities-program/regional-plan-targets, accessed: August 2019.

<sup>&</sup>lt;sup>2</sup> Southern California Association of Governments, 2016–

As discussed below, the Project qualifies as a TPP pursuant to the criteria set by PRC Section 21155 and outlined above.

**Consistency with Criterion #1:** Project consistency with use designation, density, building intensity, and applicable policies specified for the Project area in SCAG's 2016-2040 RTP/SCS.

#### Use Designation, Density, and Building Intensity

For the 2016-2040 RTP/SCS, using data collected from local jurisdictions, SCAG categorized existing land use into land use types, then combined the land use types into 35 Place Types (see Figure III-1) and classified sub-regions into one of three land use development categories (LDCs): urban, compact, or standard.<sup>4</sup> SCAG used each of these categories to describe the conditions that exist and/or are likely to exist within each specific area of the region.<sup>5</sup> SCAG notes that the LDCs utilized in the RTP/SCS are not intended to represent detailed land use policies, but are used to describe the general conditions likely to occur within a specific area if recently emerging trends, such as transit-oriented development, were to continue in concert with the implementation of the 2016-2040 RTP/SCS.

The SCAG designation for the Project Site is "Urban" LDC, the highest density and most intense land development category assessed in the 2016-2040 RTP/SCS (refer to Figures III-2 and III-3). The RTP/SCS defines the Urban areas as often found within and directly adjacent to moderate and high-density urban centers. The most intense development types are anticipated in the Urban LDC, as compared to Compact and Standard LDCs. The 2016-2040 RTP/SCS states the following:

"nearly all urban growth in these areas would be considered infill or redevelopment. The majority of housing is multi-family and attached single-family (townhome), which tend to consume less water and energy than the large types found in greater proportion in less urban locations. These areas are supported by high levels of regional and local transit service. They have well-connected street networks, and the mix and intensity of uses result in a highly walkable environment. These areas offer enhanced access and connectivity for people who choose not to drive or do not have access to a vehicle."<sup>6</sup>

The Urban LDC consists of multiple urban footprint scenario models, including Urban Mixed Use, Urban Residential, Urban Commercial, City Mixed Use, City Residential, City Commercial, Town Mixed Use, Town Residential, and Town Commercial <sup>7</sup> The Project Site would be consistent with the City Mixed Use place types within the Urban LDC, which is defined below.

City Mixed Use: City Mixed Use areas are transit-oriented and walkable, and contain a variety of uses and building types. Typical buildings are between 5 and 30 stories tall, with ground-floor retail space, and offices and/or residences on the floors above. Parking is usually structured below or above ground.

<sup>&</sup>lt;sup>4</sup> SCAG, 2016-2040 RTP/SCS, Page 20, accessed at http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS.pdf.

<sup>&</sup>lt;sup>5</sup> SCAG, 2016-2040 RTP/SCS, Pages 20-21, accessed at http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS.pdf.

<sup>6</sup> Ibid.

<sup>&</sup>lt;sup>7</sup> SCAG, 2016-2040 RTP/SCS Background Documentation, Reference Document 9, 2016; SCAG, 2016-2040 RTP/SCS Background Documentation, Reference Document 6.



Figure III-1 SCAG General Plan Land Use Types

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The Project is consistent with the Urban LDC and the City Mixed-Use place type as described in the 2016-2040 RTP/SCS, as it is located in a dense urban area and proposes to develop uses and buildings that are consistent with the contemplated place types of the RTP/SCS. Specifically, the Site is surrounded by urban land uses, including multifamily residential buildings as well as a mix of commercial buildings set in a walkable context. Moreover, the Site is well served by existing and proposed transit infrastructure, including bus transit lines along Soto Street and 1<sup>st</sup> Street, as well as the Soto Station Metro Gold Line.

At this urban location, the Project would develop a new 5-story 64.5-foot-tall mixed-use building containing a total of 64 residential units and 2,443 square feet of commercial retail space. The parking for the building would be located in a new subterranean parking garage. The building would result in an FAR of approximately 1.65:1, which is consistent with the FAR contemplated for the Town Mixed-Use place types (less than 3.4:1) and the proposed four above ground floors would be consistent with the 3-40 floor range set by the City Mixed-use place type. Construction of the Project would result in 64 units on a one-acre property, which is consistent with the gross density range of 10-75 units per acre. As such, the Project's scale, location, and mixture of land uses would be consistent with Urban LDC and corresponding City Mixed-use place types which call for developments that integrate residential uses as well as non-residential uses and subterranean parking near transit as described in the 2016-2040 RTP/SCS.

### Applicable Policies Specified for the Project Area

The Project would be consistent with applicable goals and policies presented within SCAG's 2016-2040 RTP/SCS. Refer to Table III-1 below for the Project's consistency analysis.

Goals and Policies	Consistency Assessment	
<b>2016-2040 RTP/SCS Goal 1</b> Align the plan investments and policies with improving regional economic development and competitiveness.	<b>Not Applicable.</b> This Goal is directed towards SCAG and the City of Los Angeles and not does apply to the Project.	
2016-2040 RTP/SCS Goal 2 Maximize mobility and accessibility for all people and goods in the region.	<b>Consistent.</b> The Project Site is located in a highly urbanized area in the City of Los Angeles within a high quality transit area (HQTA) (as defined by SCAG). The Project involves the development of a 5-story, mixed-use affordable housing building consisting 63 affordable units and one market rate manager's unit, 2,443 square feet of ground floor commercial space, and 50 total automobile parking spaces in a one level subterranean parking garage within an HQTA as defined by SCAG and a TPA as defined by SB 743. The Project would be incorporated into the Metro Soto Station Plaza which provides service for the Metro Gold Line. Moreover, the Project is served by Metro bus lines 30/330, 68, 106, 251, 252, 605, 751, and 770, and Montebello bus line 40. The Project would provide residents, employees, and visitors with convenient access to public transit and opportunities for walking and biking. The location of the Project encourages a variety of transportation options and access and is therefore consistent with this Goal.	
2016-2040 BTP/SCS Goal 3 Ensure travel	Consistent The Project would improve the public sidewalks	
safety and reliability for all people and	adjacent to Project Site and include active ground floor uses to	
goods in the region.	enhance the pedestrian experience and promote walkability within	

Table III-1 Consistency Analysis with the 2016-2040 Regional Transportation Plan / Sustainable Community Strategy

Goals and Policies	Consistency Assessment	
	the Metro Soto Station Plaza and public right-of-way along 1 <sup>st</sup> Street and Soto Street. In addition, the Project would provide 66 bicycle parking spaces to promote travel by bicycle. The Project includes the construction of one vehicle loading space that would be accessible by the alley to the west of the site. The designated loading space would ensure the safe delivery of goods and supplies to the site. Furthermore, the Project would be subject to the site plan review requirements of the City of Los Angeles and work with the Department of Building and Safety, Department of Transportation and the Los Angeles Fire Department to ensure that all access roads, driveways and parking areas would not create a design hazard to local roadways.	
2016-2040 RTP/SCS Goal 4 Preserve and ensure a sustainable regional transportation system.	<b>Not Applicable.</b> This goal is directed towards SCAG and does not apply to the Project. Nevertheless, the 2016-2040 RTP states, "A transportation system is sustainable if it maintains its overall performance over time in an equitable manner with minimum damage to the environment, and at the same time does not compromise the ability of future generations to address their transportation needs. Sustainability, therefore, pertains to how our decisions today impact future generations. One of the measures used to evaluate system sustainability is the total inflation-adjusted cost per capita to maintain our overall multimodal transportation system performance at current conditions. The 2016 RTP/SCS includes two additional new measures to support this outcome: State Highway System pavement condition and local roads pavement condition." <sup>8</sup> As discussed in the Project's Transportation Impact Study (Transportation Study) (Appendix D), the Project would not create a significant impact at any of the five Study intersections. Additionally, as discussed in the Transportation Impact Study, the Project would not create a significant impact at any CMP monitoring location. As such, the proposed Project would not conflict with the regional transportation system.	
<b>2016-2040 RTP/SCS Goal 5</b> Maximize the productivity of our transportation system.	<b>Consistent.</b> The Project involves the development of a 5-story, mixed-use affordable housing building consisting 63 affordable units and one market rate manager's unit, 2,443 square feet of ground floor commercial space, and 50 total automobile parking spaces in a one level subterranean parking garage. The Project would be incorporated into the Metro Soto Station Plaza which provides service for the Metro Gold Line. The Project is served by Metro bus lines 30/330, 68, 106, 251, 252, 605, 751, and 770, and Montebello bus line 40. Given the Project's location close to transit, the Project will encourage the utilization of transit as a mode of transportation to and from the Project area. Thus, the Project will contribute to the productivity and use of the regional transportation system by providing housing and jobs near transit. As discussed in the Project's Transportation Study, the Project would not create a significant	

Table III-1Consistency Analysis with the 2016-2040Regional Transportation Plan / Sustainable Community Strategy

<sup>&</sup>lt;sup>8</sup> SCAG, 2016-2040 RTP/SCS, April 2016 (page 164).

Goals and Policies	Consistency Assessment	
	impact at any of the study intersections (Appendix D). Additionally, as discussed in the Transportation Study, the Project would not create a significant impact at any CMP monitoring location.	
<b>2016-2040 RTP/SCS Goal 6</b> Protect the environment and health of our residents by improving air quality and encouraging active transportation (e.g., bicycling and walking).	<b>Consistent.</b> The Project Site's location near mass transit and proximity to services, retail stores, and employment opportunities promotes a pedestrian-friendly environment. The location of the Project promotes the use of a variety of transportation options, which includes walking, biking, and the use of public transportation. The Project would improve the public sidewalks adjacent to Project Site and would include active ground floor uses adjacent to the Metro Soto Station Plaza which would enhance the pedestrian experience and promote walkability. In addition, the Project will provide 66 bicycle spaces to promote travel by bicycle. Thus, the Project would reduce vehicles-per-miles traveled and help improve air quality. The Project supports active transportation.	
<b>2016-2040 RTP/SCS Goal 7</b> Actively encourage and create incentives for energy efficiency, where possible.	<b>Consistent.</b> The Project would comply with the City of Los Angeles Green Building Code and the California Green Building Code, including requirements for energy efficient appliances and at least five percent of all code-required parking spaces on-site shall include electric vehicle (EV) charging stations (LAMC 99.04.106.4.2).	
<b>2016-2040 RTP/SCS Goal 8</b> Encourage land use and growth patterns that facilitate transit and active transportation.	<b>Consistent.</b> As stated above, the Project Site is located in a highly urbanized area in Boyle Heights within an HQTA (as defined by SCAG) and a TPA (as defined by SB 743). The Project would be incorporated into the Metro Soto Station Plaza which provides service for the Metro Gold Line. Moreover, the Project is served by Metro bus lines 30/330, 68, 106, 251, 252, 605, 751, and 770, and Montebello bus line 40. The Project would provide residents and visitors with convenient access to public transit and opportunities for walking and biking. The Project would develop residential and commercial uses near mass transit and in close proximity to services, retail stores, and employment opportunities. The location of the Project encourages a variety of transportation options and access and is therefore consistent with this Goal.	
<b>2016-2040 RTP/SCS Goal 9</b> Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies.	<b>Not Applicable.</b> This goal is directed towards SCAG to ensure the safety and security of the regional transportation system. No further discussion is required.	
<b>2016-2040 RTP/SCS Guiding Policy 1</b> Transportation investments shall be based on SCAG's adopted regional Performance Indicators.	<b>Not Applicable.</b> This policy is directed towards SCAG in allocating transportation investments. This goal does not apply to the individual development projects and no further analysis is required.	
<b>2016-2040 RTP/SCS Guiding Policy 2</b> Ensuring safety, adequate maintenance and efficiency of operations on the existing multimodal transportation system should be the highest RTP/SCS priorities for any incremental funding in the region.	<b>Not Applicable.</b> This policy is directed towards SCAG in allocating transportation system funding. Nevertheless, the Project would contribute to a safe, well maintained, and efficient multimodal transportation system. The Project would improve the public sidewalks adjacent to Project Site and would include active ground floor uses within the Metro Soto Station Plaza which would enhance	

Table III-1Consistency Analysis with the 2016-2040Regional Transportation Plan / Sustainable Community Strategy

Goals and Policies	Consistency Assessment	
	the pedestrian experience and promote walkability. As discussed in the Project's Transportation Study, the Project would not create a significant impact at any of the study intersections (see Appendix D). Additionally, the Project would not create a significant impact at any CMP monitoring location.	
<b>2016-2040 RTP/SCS Guiding Policy 3</b> RTP/SCS land use and growth strategies in the RTP/SCS will respect local input and advance smart growth initiatives.	<b>Not Applicable.</b> This Goal is directed towards SCAG and the City of Los Angeles and not does apply to the Project. Nevertheless, the Project Site is located in a highly urbanized area in the City of Los Angeles within an HQTA (as defined by SCAG). The Project involves the development of a 5-story, mixed-use affordable housing building consisting 63-affordable units and 1-market rate manager's unit, 2,443 square feet of ground floor commercial space, and 50 total automobile parking spaces in a one level subterranean parking garage within an HQTA as defined by SCAG and a TPA as defined by SB 743. The Project Site's location near mass transit and proximity to services, retail stores, and employment opportunities promotes a pedestrian-friendly environment. The location of the Project promotes the use of a variety of transportation options, which includes walking, biking, and the use of public transportation. Therefore, the Project would increase residential uses in transit-rich areas near services, retail, and employment opportunities.	
<b>2016-2040 RTP/SCS Guiding Policy 4</b> Transportation demand management (TDM) and active transportation will be focus areas, subject to Policy 1.	<b>Not Applicable.</b> This policy is directed towards transportation investment by SCAG. However, the Project would support active transportation (e.g. walking and bicycling) by improving the public sidewalks adjacent to Project Site and by including active ground floor uses adjacent to the Metro Soto Station Plaza which would enhance the pedestrian experience and promote walkability. In addition, the Project will provide 66 bicycle spaces to promote travel by bicycle. Moreover, the Project's location within an HQTA promotes the use of public transit and pedestrian activity.	
<b>2016-2040 RTP/SCS Guiding Policy 5</b> HOV gap closures that significantly increase transit and rideshare usage will be supported and encouraged, subject to Policy 1.	<b>Not Applicable.</b> This policy is directed towards transportation investment by SCAG to support HOV, transit and rideshare. Although this policy is not applicable to the Project, the Project's location in an HQTA promotes the use of public transit and pedestrian activity.	
<ul> <li>2016-2040 RTP/SCS Guiding Policy 6 The RTP/SCS will support investments and strategies to reduce non-recurrent congestion and demand for single occupancy vehicle use, by leveraging advanced technologies.</li> <li>2016-2040 RTP/SCS Guiding Policy 7 The</li> </ul>	<b>Not Applicable.</b> This Guiding Policy relates to SCAG goals in supporting investments and strategies to reduce congestion and the use of single occupancy vehicles. Nevertheless, the Project is located within an HQTA (as defined by SCAG) and a TPA (as defined by SB 743). The Project would support public transportation and other alternative methods of transportation (e.g., walking and biking). <b>Not Applicable.</b> This policy is directed towards SCAG and	
RTP/SCS will encourage transportation investments that result in cleaner air, a better environment, a more efficient transportation system and sustainable outcomes in the long run.	governmental agencies to encourage and support transportation investments.	

Table III-1Consistency Analysis with the 2016-2040Regional Transportation Plan / Sustainable Community Strategy

Goals and Policies	Consistency Assessment	
<b>2016-2040 RTP/SCS Guiding Policy 8</b> Monitoring progress on all aspects of the Plan, including the timely implementation of projects, programs, and strategies, will be an important and integral component of the Plan.	<b>Not Applicable.</b> This policy is directed towards SCAG and the City of Los Angeles and not does apply to the Project.	
<b>2016-2040 RTP/SCS Land Use Policy 1</b> Identify regional strategic areas for infill and investment.	<b>Not Applicable.</b> This policy is directed towards SCAG to identify regional strategic areas. The Project is an infill development in an HQTA (defined by SCAG) and within a TPA (as defined by SB 743). The Project would be providing affordable residential units and commercial uses in a highly urbanized area within the City of Los Angeles.	
<b>2016-2040 RTP/SCS Land Use Policy 2</b> Structure the plan on a three-tiered system of centers development. <sup>9</sup>	<b>Not Applicable.</b> This Land Use Policy is directed towards SCAG and does not apply to the Project.	
2016-2040 RTP/SCS Land Use Policy 3 Develop "Complete Communities."	<b>Consistent.</b> SCAG describes the development of "complete communities" to provide areas that encourage households to be developed with a range of mobility options to complete short trips. The 2016-2040 RTP/SCS supports the creation of these districts through a concentration of activities with housing, employment, and a mix of retail and services, located in close proximity to each other, where most daily needs can be met within a short distance of home, providing residents with the opportunity to patronize their local area and run daily errands by walking or cycling rather than traveling by automobile. <sup>10</sup> As stated above, the Project involves the development of a 5-story, mixed-use affordable housing building consisting 63 affordable units and one market rate manager's unit, 2,443 square feet of ground floor commercial space, and 50 total automobile parking spaces in a one level subterranean parking garage in a transit-rich area. The Project Site's location near mass transit and in proximity to services, retail stores, and employment opportunities promotes the use of a variety of transportation options, which includes walking, biking, and the use of public transportation. Therefore, the Project would be consistent with the SCAG's goals of increasing mixed commercial/residential uses in transit-rich areas near services, retail, and employment opportunities to reduce vehicles-per-miles traveled.	

Table III-1Consistency Analysis with the 2016-2040Regional Transportation Plan / Sustainable Community Strategy

<sup>&</sup>lt;sup>9</sup> The 2016-2040 RTP/SCS reaffirms the 2008 Advisory Land Use Policies that were incorporated into the 2012-2035 RTP/SCS. The complete language from the original SCAG Advisory Land Use Policies is "Identify strategic centers based on a three-tiered system of existing, planned and potential relative to transportation infrastructure. This strategy more effectively integrates land use planning and transportation investment." A more detailed description of these strategies and policies can be found on pages 90–92 of the SCAG 2008 Regional Transportation Plan, adopted in May 2008.

<sup>&</sup>lt;sup>10</sup> SCAG, 2016-2040 RTP/SCS, April 2016 (page 79).

Goals and Policies	Consistency Assessment	
2016-2040 RTP/SCS Land Use Policy 4 Develop nodes on a corridor.	<b>Not Applicable.</b> The 2016-2040 RTP/SCS describes nodes as mixed- use development centers at key locations that meet most of residents' daily needs and that support livable corridors. This policy is directed towards SCAG and City goals to identify and develop locations that promote nodes. Nevertheless, the Project is located within a HQTA and a TPA. The Project's design and location encourages the use of alternative transportation and walking and bicycling opportunities.	
<b>2016-2040 RTP/SCS Land Use Policy 5</b> Plan for additional housing and jobs near transit.	<b>Consistent.</b> As stated above, the Project involves the development of a 5-story, mixed-use affordable housing building consisting 63 affordable units and one market rate manager's unit, 2,443 square feet of ground floor commercial space, and 50 total automobile parking spaces in a one level subterranean parking garage in an HQTA and a TPA. The Project would be incorporated into the Metro Soto Station Plaza which provides service for the Metro Gold Line. Moreover, the Project is served by Metro bus lines 30/330, 68, 106, 251, 252, 605, 751, and 770, and Montebello bus line 40. In addition, the Project would provide 66 bicycle spaces. These services would promote the use of a variety of transportation options, which includes walking, biking, and the use of public transportation.	
<b>2016-2040 RTP/SCS Land Use Policy 6</b> Plan for changing demand in types of housing.	<b>Consistent.</b> The Project involves the development of a 5-story, mixed-use affordable housing building that would provide 63 affordable units and one market rate manager's unit. The Project's units would be comprised of 13 studios, 18 one-bedrooms, 17 two-bedrooms, and 16 three-bedrooms. The range in unit sizes would serve to contribute to a range of housing choices and would be available to all persons, including residents in the Project area.	
<b>2016-2040 RTP/SCS Land Use Policy 7</b> Continue to protect stable, existing single- family areas.	<b>Consistent.</b> The Project would not demolish any existing single- family homes. The Project site is located in an area that is developed with single-family residences and two of the six project parcels are zoned for residential development. As discussed in Section V and VI of this SCEA, no significant environmental impacts have been identified with the proposed Project that would affect the existing single-family homes in the area.	
2016-2040 RTP/SCS Land Use Policy 8 Ensure adequate access to open space and preservation of habitat.	<b>Not Applicable.</b> This Land Use Policy is directed towards SCAG and does not apply to the Project. Nevertheless, the Project Site is located within an urbanized area within the City of Los Angeles and is primarily vacant aside from the existing Soto Metro Station. As discussed in Sections V and VI of this SCEA, there are no special status species, habitats, or areas with potential habitat on the Project Site. The project would result in the installation of 16 new trees and 3,321 square feet of landscaping. The Project would provide 8,171 square feet of open space that exceeds the required amount pursuant to the LAMC.	
<b>2016-2040 RTP/SCS Land Use Policy 9</b> Incorporate local input and feedback on future growth.	<b>Not Applicable.</b> This Land Use Policy is directed towards SCAG and does not apply to the Project.	

# Table III-1Consistency Analysis with the 2016-2040Regional Transportation Plan / Sustainable Community Strategy

Goals and Policies	Consistency Assessment	
<b>2016-2040 RTP/SCS Benefit 1:</b> The RTP/SCS will promote the development of better places to live and work through measures that encourage more compact development in certain areas of the region, varied housing options, bicycle and pedestrian improvements, and efficient transportation infrastructure.	<b>Consistent.</b> The Project will provide 63 affordable residential units and one market rate manager's unit ranging in size and the number of bedrooms, which would provide varied housing options in the area. In addition, the Project will provide bicycle parking and various pedestrian-oriented improvements, including improved sidewalks and active ground floor uses adjacent to the Metro Soto Station Plaza.	
<b>2016 RTP/SCS Benefit 2:</b> The RTP/SCS will encourage strategic transportation investments that add appropriate capacity and improve critical road conditions in the region, increase transit capacity and expand mobility options. Meanwhile, the Plan outlines strategies for developing land in coming decades that will place destinations closer together, thereby decreasing the time and cost of traveling between them	<b>Not Applicable.</b> Benefit 2 is directed towards SCAG and not does apply to the Project.	
<b>2016 RTP/SCS Benefit 3:</b> The RTP/SCS is expected to result in less energy and water consumption across the region, as well as lower transportation costs for households	<b>Consistent.</b> The Project includes numerous energy-efficient design features, such as energy star rated appliances. It will comply with the City of Los Angeles Green Building Code and the California Green Building Code, including at least five percent of all parking spaces on-site shall include electric vehicle (EV) charging stations. The Project's incorporation of bicycle- and pedestrian-friendly elements and location near various bus lines and the Metro Soto Station Plaza will provide future residents with various affordable transportation options.	
<b>2016 RTP/SCS Benefit 4:</b> Improved placemaking and strategic transportation investments will help improve air quality; improve health as people have more opportunities to bicycle, walk and pursue other active alternatives to driving; and better protect natural lands as new growth is concentrated in existing urban and suburban areas.	<b>Not Applicable.</b> Benefit 4 is directed towards SCAG and does not apply to the Project. Nonetheless, the Project will encourage improved access and mobility by providing residential and commercial uses close to transit and retail opportunities. The Project's location in an urban area will provide residents with retail and dining options that are easily accessible on foot or by bicycle. In addition, the Project's access to various transit options will encourage the use of existing and proposed mass transit. The Project also includes 8,171 square feet of open space including a central courtyard, community terrace, roof terrace, community room, exercise room, and private balconies	
Source: Southern California Association of Governments, 2016-2040 RTP/SCS, April 2016		

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## Consistency with Criterion #2: Based on total building square footage, the Project contains at least 50 percent residential use.

The Project includes the construction of a total floor area of 77,945 square feet including 2,443 square feet of ground floor commercial space. As such, the Project's 64 residential units (75,155 square feet) would cover over 50 percent of the floor area. As such, the Project would be consistent with this Criterion.

## *Consistency with Criterion #3: The Project includes a minimum net density of at least 20 dwelling units per acre.*

The Project Site is approximately 1.08 acres before street dedications. The Project includes 64 residential units; as such, the Project provides approximately 61 dwelling units per acre. As such, the Project would be consistent with this Criterion.

## *Consistency with Criterion #4: The Project Site is located within one-half mile of a major transit stop or high-quality transit corridor included in the 2016-2040 RTP/SCS.*

PRC Section 21064.3 defines "major transit stop" as "a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods."

The Project Site encompasses the Metro Soto Station Plaza which provides service for the Metro Gold Line. Therefore, the Project is located within one-half mile of a major transit stop. Additionally, the Project is served by Metro bus lines 30/330, 68, 106, 251, 252, 605, 751, and 770, and Montebello bus line 40. As shown in Figure III-2 and Figure III-3, the 2016-2040 RTP/SCS identifies the Project Site as being within an existing and future HQTA. Therefore, the Project is located within a high-quality transit corridor. The Project is consistent with this Criterion.

### 3. SB 375 STREAMLINING BENEFITS

Pursuant to PRC Section 21155.2(a), if the Project incorporates all feasible mitigation measures, performance standards, or criteria set forth in the prior applicable environmental impact reports and adopted in findings made pursuant to PRC Section 21081, shall be eligible for either the provisions of subdivision (b) (sustainable communities environmental assessment) or (c) (limited analysis EIR). The Project would follow subdivision (b), and the Project would be reviewed through a Sustainable Communities Environmental Assessment (SCEA), which provides streamlining benefits.

PRC Section 21155.2(b) states that an initial study shall be prepared to identify all significant or potentially significant impacts of the transit priority project, other than those which do not need to be reviewed pursuant to Section 21159.28 based on substantial evidence in light of the whole record. The initial study shall identify any cumulative effects that have been adequately addressed and mitigated pursuant to the requirements of this division in prior applicable certified environmental impact reports. Where the lead agency determines that a cumulative effect has been adequately addressed and mitigated, that cumulative effect shall not be treated as cumulatively considerable. As such streamlining benefits include:

- Cumulative effects that have been adequately addressed and mitigated in prior applicable certified environmental impact reports shall not be treated as cumulatively considerable for the Project (PRC Section 21155.2(b)(1));
- Growth-inducing impacts are not required to be referenced, described, or discussed (PRC Section 21159.28(a));

- 3. Project-specific or cumulative impacts from cars and light-duty truck trips generated by the Project on global warming or the regional transportation network are not required to be referenced, described, or discussed (PRC Section 21159.28(a);
- 4. Reduced density alternatives are not required to be referenced, described, or discussed to address the effects of car and light-duty truck trips generated by the Project (PRC Section 21159.28(b)).

The City of Los Angeles, Department of City Planning would incorporate all applicable streamlining benefits in the environmental review of the Project.

### 4. SCOPE OF ANALYSIS

Pursuant to PRC Section 21155.2(b), the SCEA is required to identify all significant or potentially significant impacts of the transit priority project, other than those which do not need to be reviewed pursuant to Section 21159.28 based on substantial evidence in light of the whole record. The SCEA would also be required to identify any cumulative effects that have been adequately addressed and mitigated in prior applicable certified environmental impact reports. As such, the SCEA would analyze the following topics:

- 1. Aesthetics
- 2. Agriculture and Forestry Resources
- 3. Air Quality
- 4. Biological Resources
- 5. Cultural Resources
- 6. Energy
- 7. Geology and Soils
- 8. Greenhouse Gas Emissions
- 9. Hazards and Hazardous Materials
- 10. Hydrology and Water Quality
- 11. Land Use and Planning

- 12. Mineral Resources
- 13. Noise
- 14. Population and Housing
- 15. Public Services
- 16. Recreation
- 17. Transportation
- 18. Tribal Cultural Resources
- 19. Utilities and Service Systems
- 20. Wildfire
- 21. Mandatory Findings of Significance

### 1. INCORPORATION OF APPLICABLE MITIGATION MEASURES FROM PRIOR EIRS

Public Resources Code (PRC) Section 21151.2 requires that a Transit Priority Project (TPP) incorporate all feasible mitigation measures, performance standards, or criteria from prior applicable EIRs, including the 2016-2040 RTP/SCS Draft Program Environmental Impact Report for Southern California Association of Governments dated December 2015 (RTP/SCS PEIR).

The Mitigation Monitoring and Reporting Program for the 2016–2040 RTP/SCS PEIR (SCAG MMRP) does not include project level mitigation measures that are required of the Project. Rather, the SCAG MMRP provides a list of mitigation measures that SCAG determined a lead agency can and should consider, as applicable and feasible, where the agency has identified that a project has the potential for significant effects. The SCAG measures are not prescriptive on the Project unless the lead agency determines their applicability to the Project based on the circumstances and anticipated environmental impacts.

In accordance with the requirements set forth in PRC Section 21151.2, the Lead Agency has reviewed all V-1 below.

# Table IV-1Applicability of Project-Level Mitigation Measures from the2016-2040 Regional Transportation Plan/Sustainable Communities Strategy

Торіс	Measure	Applicability to the Project
Aesthetics	Project-Level Mitigation Measure	This Mitigation Measure is not relevant to the Project. Public Resources Code
Scenic Vista	<b>MM-AES-1(b):</b> Consistent with the provisions of Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures capable of avoiding or reducing the significant effects of visual intrusions on scenic vistas, or National Scenic Byways that are in the jurisdiction and responsibility of Caltrans, other public agencies, and/or Lead Agencies. Where the Lead Agency has identified that a project has the potential for significant effects, the Lead Agency can and should consider mitigation measures to ensure compliance with regulations for Caltrans scenic vistas and goals and policies within county and city general plans, as applicable and feasible. Such measures may include the following, or other comparable measures identified by the Lead Agency:	Section 21099, enacted by Senate Bill 743, provides that "aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment." The Project involves the development of a 5-story, mixed-use affordable housing building consisting 63-affordable units and 1- market rate manager's unit, 2,443 square feet of ground floor commercial space, and 50 total automobile parking spaces in a one level subterranean parking garage. The Project would be incorporated into the Metro Soto Station Plaza which provides service for the Metro Gold Line. Moreover, the Project is served
	• Use a palette of colors, textures, building materials that are granite-resistant, and/or plant materials that complement the surrounding landscape and development.	by Metro bus lines 30/330, 68, 106, 251, 252, 605, 751, and 770, and Montebello bus line 40 The Project would be within an HQTA as defined by SCAG and a TPA
	<ul> <li>Use contour grading to better match surrounding terrain. Contour edges of major cut-and-fill to provide a more natural looking finished profile.</li> </ul>	as defined by SB 743. The Project's aesthetic impacts shall not be considered significant impacts on the environment pursuant to Public Resources Code
	<ul> <li>Use alternating facades to "break up" large facades and provide visual interest.</li> </ul>	Section 21099.
	<ul> <li>Design new corridor landscaping to respect existing natural and man-made features and to complement the dominant landscaping of the surrounding areas.</li> </ul>	
	<ul> <li>Replace and renew landscaping along corridors with road widenings, interchange projects, and related improvements.</li> </ul>	
	Retain or replace trees bordering highways, so that clear-cutting is not evident.	
	<ul> <li>Provide new corridor landscaping that respects and provides appropriate transition to existing natural and man-made features and is complementary to the dominant landscaping or native habitats of surrounding areas.</li> </ul>	
	<ul> <li>Implement design guidelines, local policies, and programs aimed at protecting views of scenic corridors and avoiding visual intrusions in design of projects to minimize contrasts in scale and massing between the project and surrounding natural forms and developments. Avoid, if possible, large cuts and fills when the visual environment (natural or urban) would be substantially disrupted. Site or design of projects should minimize their intrusion into important viewsheds and use contour grading to better match surrounding terrain.</li> </ul>	
<u>Aesthetics</u>	Project-Level Mitigation Measure	This Mitigation Measure is not relevant to the Project. Public Resources Code
Visual Character/Quality	<ul> <li>MM-AES-3(b): Consistent with the provisions of Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures capable of avoiding or reducing the significant effects of degrading the existing public viewpoints, visual character, or quality of the site that are in the jurisdiction and responsibility of local jurisdictions and/or Lead Agencies. Where the Lead Agency has identified that a project has the potential for significant effects, the Lead Agency can and should consider mitigation measures to ensure compliance with the goals and policies within county and city general plans, as applicable and feasible. Such measures may include the following, or other comparable measures identified by the Lead Agency:</li> <li>Minimize contrasts in scale and massing between the projects and surrounding natural forms and</li> </ul>	Section 21099, enacted by Senate Bill 743, provides that "aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment." The Project involves the development of a 5-story, mixed-use affordable housing building consisting 63-affordable units and 1-market rate manager's unit, 2,443 square feet of ground floor commercial space, and 50 total automobile parking spaces in a one level subterranean parking garage. The Project would be incorporated into the Metro Soto Station Plaza which provides service for the Metro Gold Line. Moreover, the Project is served

Торіс	Measure	Applicability to the Project
	development, minimize their intrusion into important viewsheds, and use contour grading to better match surrounding terrain in accordance with county and city hillside ordinances, where applicable.	by Metro bus lines 30/330, 68, 106, 251, 252, 605, 751, and 770, and Montebello bus line 40 The Project would be within an HQTA as defined by SCAG and a TPA
	<ul> <li>Design landscaping along highway corridors to add significant natural elements and visual interest to soften the hard-edged, linear transportation corridors.</li> </ul>	as defined by SB 743. The Project's aesthetic impacts shall not be considered significant impacts on the environment pursuant to Public Resources Code Section 21000
	<ul> <li>Require development of design guidelines for projects that make elements of proposed buildings/facilities visually compatible, or minimize visibility of changes in visual quality or character through use of hardscape and softscape solutions. Specific measures to be addressed include setback buffers, landscaping, color, texture, signage, and lighting criteria.</li> </ul>	
	Design projects consistent with design guidelines of applicable general plans.	
	<ul> <li>Apply development standards and guidelines to maintain compatibility with surrounding natural areas, including site coverage, building height and massing, building materials and color, landscaping, site grading, and so forth in accordance with general plans and adopted design guidelines, where applicable.</li> </ul>	
	<ul> <li>Require that sites are kept in a blight/nuisance-free condition. Remove blight or nuisances that compromise visual character or visual quality of project areas including graffiti abatement, trash removal, landscape management, maintenance of signage and billboards in good condition, and replace compromised native vegetation and landscape.</li> </ul>	
Aesthetics	Project-Level Mitigation Measure	This Mitigation Measure is not relevant to the Project. Public Resources Code
Light/Glare/Shade	<b>MM-AES-4(b):</b> Consistent with the provisions of Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures capable of avoiding or minimizing the effects of light and glare on routes of travel for motorists, cyclists, and pedestrians, or on adjacent properties, and limit expanded areas of shade and shadow to areas that would not adversely affect open space or outdoor recreation areas that are in the jurisdiction and responsibility of local jurisdictions and/or Lead Agencies. Where the Lead Agency has identified that a project has the potential for significant effects, the Lead Agency can and should consider mitigation measures to ensure compliance with the goals and policies within county and city general plans, as applicable and feasible. Such measures may include the following, or other comparable measures identified by the Lead Agency:	Section 21099, enacted by Senate Bill 743, provides that "aesthetic and parkin impacts of a residential, mixed-use residential, or employment center project of an infill site within a transit priority area shall not be considered significar impacts on the environment." The Project involves the development of a 5-stor mixed-use affordable housing building consisting 63-affordable units and market rate manager's unit, 2,443 square feet of ground floor commercial spac and 50 total automobile parking spaces in a one level subterranean parkin garage. The Project would be incorporated into the Metro Soto Station Pla: which provides service for the Metro Gold Line. Moreover, the Project is serve
	<ul> <li>Use lighting fixtures that are adequately shielded to a point below the light bulb and reflector and that prevent unnecessary glare onto adjacent properties.</li> </ul>	by Metro bus lines 30/330, 68, 106, 251, 252, 605, 751, and 770, and Montebello bus line 40 The Project would be within an HQTA as defined by SCAG and a TPA as defined by SB 743. The Project's aesthetic impacts shall not be considered
	<ul> <li>Restrict the operation of outdoor lighting for construction and operation activities in accordance with local regulations.</li> </ul>	significant impacts on the environment pursuant to Public Resources Code Section 21099.
	<ul> <li>Use high pressure sodium and/or cut-off fixtures instead of typical mercury-vapor fixtures for outdoor lighting.</li> </ul>	
	Use unidirectional lighting to avoid light trespass onto adjacent properties.	
	<ul> <li>Design exterior lighting to confine illumination to the project site, and/or to areas which do not include light-sensitive uses.</li> </ul>	
	<ul> <li>Provide structural and/or vegetative screening from light-sensitive uses.</li> </ul>	
	Shield and direct all new street and pedestrian lighting away from light-sensitive off-site uses.	
	<ul> <li>Use non-reflective glass or glass treated with a non-reflective coating for all exterior windows and glass used on building surfaces.</li> </ul>	
	<ul> <li>Architectural lighting shall be directed onto the building surfaces and have low reflectivity to minimize glare and limit light onto adjacent properties.</li> </ul>	

Торіс	Measure	Applicability to the Project
Agriculture and Forestry Conversion of Farmland to Non-Ag Use, Conversion of Forest Land	Project-Level Mitigation Measure MM-AF-1(b): Consistent with the provisions of Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures capable of avoiding or reducing the significant effects from the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural uses that are within the jurisdiction and responsibility of the Natural Resources Conservation Service, the California Resources Agency, other public agencies, and/or Lead Agencies. Where the Lead Agency has identified that a project has the potential for significant effects, the Lead Agency can and should consider mitigation measures to ensure compliance with the Farmland Protection Act and implementing regulations, and the goals and policies established within the applicable adopted county and city general plans to protect agricultural resources consistent with the Farmland Mapping and Monitoring Program of the California Resources Agency. Such measures may include the following, or other comparable measures identified by the Lead Agency taking into account project and site-specific considerations as applicable and feasible:	This Mitigation Measure is not relevant to the Project. There is no farmland or agricultural activity exists on or in the vicinity of the Project Site. As such, there is no potential for significant effects related to this Mitigation Measure to occur.
	• For projects that require approval or funding by the USDOT, comply with Section 4(f) U.S. Department of Transportation Act of 1966 (USDOT Act).	
	• Project relocation or corridor realignment to avoid Prime Farmland, Unique Farmland, or Farmland of Local or Statewide Importance.	
	Maintain and expand agricultural land protections such as urban growth boundaries.	
	Support the acquisition or voluntary dedication of agriculture conservation easements and other programs that preserve agricultural lands, including the creation of farmland mitigation banks. Local governments would be responsible for encouraging the development of agriculture conservation easements or farmland mitigation banks, purchasing conservation agreements or farmland for mitigation, and ensuring that the terms of the conservation easement agreements are upheld. The California Department of Fish and Wildlife provides a definition for conservation or mitigation banks on their website (please see https://www.wildlife.ca.gov/Conservation/Planning/Banking)	
	"A conservation or mitigation bank is privately or publicly owned land managed for its natural resource values. In exchange for permanently protecting, managing, and monitoring the land, the bank sponsor is allowed to sell or transfer habitat credits to permitees who need to satisfy legal requirements and compensate for the environmental impacts of developmental projects.	
	A privately owned conservation or mitigation bank is a free-market enterprise that:	
	Offers landowners economic incentives to protect natural resources;	
	<ul> <li>Saves permitees time and money by providing them with the certainty of pre-approved compensation lands;</li> </ul>	
	• Consolidates small, fragmented wetland mitigation projects into large contiguous sites that have much higher wildlife habitat values;	
	Provides for long-term protection and management of habitat.	
	A publicly owned conservation or mitigation bank:	
	<ul> <li>Offers the sponsoring public agency advance mitigation for large projects or multiple years of operations and maintenance."</li> </ul>	
	In 2013, the University of California published an article entitled "Reforms could boost conservation banking by landowners" that speaks specifically to the use of agricultural lands for in conjunction with conservation banking programs.	

Торіс	Measure	Applicability to the Project
	<ul> <li>Provide for mitigation fees to support a mitigation bank that invests in farmer education, agricultural infrastructure, water supply, marketing, etc. that enhance the commercial viability of retained agricultural lands.</li> </ul>	
	Include underpasses and overpasses at reasonable intervals to maintain property access.	
	<ul> <li>Use berms, buffer zones, setbacks, and fencing to reduce conflicts between new development and farming uses and protect the functions of farmland.</li> </ul>	
	<ul> <li>Ensure individual projects are consistent with federal, state, and local policies that preserve agricultural lands and support the economic viability of agricultural activities, as well as policies that provide compensation for property owners if preservation is not feasible.</li> </ul>	
	<ul> <li>Contact the California Department of Conservation and each county's Agricultural Commissioner's office to identify the location of prime farmlands and lands that support crops considered valuable to the local or regional economy and evaluate potential impacts to such lands using the land evaluation and site assessment (LESA) analysis method (CEQA Guidelines §21095), as appropriate. Use conservation easements or the payment of in-lieu fees to offset impacts.</li> </ul>	
Agriculture and	Project-Level Mitigation Measure	This Mitigation Measure is not relevant to the Project. The Project Site is not
<u>Forestry</u> Zoning for Ag Use, Williamson Act Contract	<b>MM-AF-2(b):</b> Consistent with the provisions of Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures capable of avoiding or reducing the significant effects from conflict with existing zoning for agricultural use or a Williamson Act contract that are within the jurisdiction and responsibility of the California Department of Conservation, other public agencies, and Lead Agencies. Where the Lead Agency has identified that a project has potential for significant effects, the Lead Agency can and should consider mitigation measures to mitigate the significant effects of agriculture and forestry resources to ensure compliance with the goals and policies established within the applicable adopted county and city general plans to protect agricultural resources consistent with the California Land Conservation Act of 1965, the Farmland Security Zone Act, and county and city zoning codes, as applicable and feasible. Such measures may include the following, or other comparable measures identified by the Lead Agency, taking into account project and site-specific considerations as applicable and feasible:	zoned for agricultural production, there is no farmland at the Project Site, and there are no Williamson Act Contracts in effect for the Project Site. As such, there is no potential for significant effects related to this Mitigation Measure to occur.
	Project relocation or corridor realignment to avoid lands in Williamson Act contracts.	
	<ul> <li>Establish conservation easements consistent with the recommendations of the Department of Conservation, or 20-year Farmland Security Zone contracts (Government Code Section 51296 et seq.), 10-year Williamson Act contracts (Government Code Section 51200 et seq.), or use of other conservation tools available from the California Department of Conservation Division of Land Resource Protection.</li> </ul>	
	<ul> <li>Prior to final approval of each project, encourage enrollments of agricultural lands for counties that have Williamson Act programs, where applicable.</li> </ul>	
<u>Air Quality</u>	Project-Level Mitigation Measure	The Project would substantially conform to this Mitigation Measure. The City
Potential to Violate AQ Standard	<b>MM-AIR-2(b):</b> Consistent with the provisions of Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures that are within the jurisdiction and authority of the CARB, air quality management districts, and other regulatory agencies. Where the Lead Agency has identified that a project has the potential to violate an air quality standard or contribute substantially to an existing air quality violation, the Lead Agency can and should consider the measures that have been identified by CARB and air district(s)	<ul> <li>Project, which have been identified by CARB and the South Coast Air Quality</li> <li>Management District (SCAQMD) to facilitate consistency with plans for attainment of the NAAQS and CAAQS, as applicable and feasible:</li> <li>CARB Anti-Idling Air Toxics Control Measure: This measure, codified in Title</li> </ul>
	and other agencies as set forth below, or other comparable measures, to facilitate consistency with plans for attainment of the NAAQS and CAAQS, as applicable and feasible.	13 California Code of Regulations (CCR) Section 2485, applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10.000

Торіс	Measure	Applicability to the Project
	<ul> <li>CARB, South Coast AQMD, Antelope Valley AQMD, Imperial County APCD, Mojave Desert AQMD, Ventura County APCD, and Caltrans have identified project-level feasible measures to reduce construction emissions:</li> <li>Minimize land disturbance.</li> <li>Use watering trucks to minimize dust; watering should be sufficient to confine dust plumes to the</li> </ul>	pounds that are licensed to operate on highways, regardless of where they are registered. This measure does not allow diesel-fueled commercial vehicles to idle for more than 5 minutes at any given time, with certain exception for vehicles where idling is a necessary performance activity such as for concrete trucks.
	<ul> <li>Suspend grading and earth moving when wind gusts exceed 25 miles per hour unless the soil is wet enough to prevent dust plumes.</li> <li>Cover trucks when hauling dirt.</li> <li>Stabilize the surface of dirt piles if not removed immediately.</li> </ul>	<ul> <li>Rule 401 – Visible Emissions: This rule states that a person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than three minutes in any one hour which is as dark or darker in shade as that designated No. 1 on the Ringelmann Chart or of such opacity as to obscure an observer's view.</li> </ul>
	<ul> <li>Stabilize the surface of the place in hot removed immediately.</li> <li>Limit vehicular paths on unpaved surfaces and stabilize any temporary roads.</li> <li>Minimize unnecessary vehicular and machinery activities.</li> <li>Revegetate disturbed land, including vehicular paths created during construction to avoid future off-road vehicular activities.</li> <li>On Caltrans projects, Caltrans Standard Specifications 10-Dust Control, 17-Watering, and 18-Dust</li> </ul>	• Rule 402 – Nuisance: This rule states that a person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.
	<ul> <li>Palliative shall be incorporated into project specifications.</li> <li>Require contractors to assemble a comprehensive inventory list (i.e., make, model, engine year, horsepower, emission rates) of all heavy-duty off-road (portable and mobile) equipment (50 horsepower and greater) that could be used an aggregate of 40 or more hours for the construction project. Prepare a plan for approval by the applicable air district demonstrating achievement of the applicable percent reduction for a CARB-approved fleet.</li> </ul>	<ul> <li>Rule 403 – Fugitive Dust: This rule requires projects to prevent, reduce or mitigate fugitive dust emissions from a site. Rule 403 restricts visible fugitive dust to the project property line, restricts the net PM10 emissions to less than 50 micrograms per cubic meter (µg/m3) and restricts the tracking out of bulk materials onto public roads. Additionally, projects must utilize one or more of the best available control measures (identified in the tables within the rule). Dust control measures may include adding freeboard to haul</li> </ul>
	<ul> <li>Ensure that all construction equipment is properly tuned and maintained.</li> <li>Provide an operational water truck on-site at all times. Use watering trucks to minimize dust; watering should be sufficient to confine dust plumes to the project work areas. Sweep paved streets at least once per day where there is evidence of dirt that has been carried on to the roadway.</li> <li>Project sponsors should ensure to the extent possible that construction activities utilize grid-based electricity and/or onsite renewable electricity generation rather than diesel and/or gasoline powered</li> </ul>	<ul> <li>vehicles, covering loose material on haul vehicles, watering, using chemical stabilizers and/or ceasing all activities. Finally, a contingency plan may be required if so determined by the USEPA.</li> <li>Rule 1113 – Architectural Coatings: This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limit on the VOC content of various coatings actions for the second seco</li></ul>
	<ul> <li>Develop a traffic plan to minimize traffic flow interference from construction activities. The plan may include advance public notice of routing, use of public transportation, and satellite parking areas with a shuttle service. Schedule operations affecting traffic for off-peak hours. Minimize obstruction of through- traffic lanes. Provide a flag person to guide traffic properly and ensure safety at construction sites.</li> </ul>	<ul> <li>Rule 1166 – VOC Emissions from Decontamination of Soil: The Project includes MM HAZ-1, which includes features required to comply with this rule. This rule requires ongoing monitoring for soils with VOCs, ongoing testing of soils, the segregation and covering of soils with VOCs, and appropriate removal and disposal of soils with VOCs.</li> </ul>
	• As appropriate, require that portable engines and portable engine-driven equipment units used at the project work site, with the exception of on-road and off-road motor vehicles, obtain CARB Portable Equipment Registration with the state or a local district permit. Arrange appropriate consultations with the CARB or the District to determine registration and permitting requirements prior to equipment operation at the site.	<ul> <li>Rule 1186 – PM10 Emissions from Paved and Unpaved Roads, and Livestock Operations: This rule applies to owners and operators of paved and unpaved roads and livestock operations. The rule is intended to reduce PM10 emissions by requiring the cleanup of material deposited onto paved roads, use of certified street sweeping equipment, and treatment of high-use unpaved roads (see also Rule 403).</li> </ul>
	<ul> <li>Implement EPA's National Clean Diesel Program.</li> <li>Diesel- or gasoline-powered equipment shall be replaced by lowest emitting feasible for each piece of equipment from among these options: electric equipment whenever feasible, gasoline-powered</li> </ul>	<ul> <li>Rule 1403 – Asbestos Emissions from Demolition/Renovation Activities: The Project would comply with the requirements of this rule if asbestos is found</li> </ul>

Торіс	Measure	Applicability to the Project
	<ul><li>equipment if electric infeasible.</li><li>On-site electricity shall be used in all construction areas that are demonstrated to be served by electricity.</li></ul>	during the renovation and construction activities. With regulatory compliance, the risk related to any existing asbestos-containing building materials (ACBMs) at the Project Site would be reduced to acceptable levels, and the Project would result in no impact with regard to ACBMs.
	<ul> <li>If cranes are required for construction, they shall be rated at 200 hp or greater equipped with Tier 4 or equivalent engines.</li> </ul>	Rule 1470 - Requirements for Stationary Diesel- Fueled Internal Combustion
	• Use alternative diesel fuels, such as Clean Fuels Technology (water emulsified diesel fuel) or O2 diesel ethanol-diesel fuel (O2 Diesel) in existing engines	and Other Compression Ignition Engines: The Project emergency generator would comply with the mandated emission limits and operating hour constraints of this rule, including applicable requirements of Colifernia Code
	<ul> <li>Convert part of the construction truck fleet to natural gas.</li> </ul>	of Regulations (CCR). Title 17. Section 93115 as incorporated into the rule.
	• Include "clean construction equipment fleet", defined as a fleet mix cleaner than the state average, in all construction contracts	
	• Fuel all off-road and portable diesel powered equipment with ARB-certified motor vehicle diesel fuel (non-taxed version suitable for use off-road)	
	• Use electric fleet or alternative fueled vehicles where feasible including methanol, propane, and compressed natural gas	
	• Use diesel construction equipment meeting ARB's Tier 4 certified engines or cleaner offroad heavy-duty diesel engines and comply with State off-road regulation	
	<ul> <li>Use on-road, heavy-duty trucks that meet the ARB's 2007 or cleaner certification standard for on-road diesel engines, and comply with the State on-road regulation</li> </ul>	
	<ul> <li>Use idle reduction technology, defined as a device that is installed on the vehicle that automatically reduces main engine idling and/or is designed to provide services, e.g., heat, air conditioning, and/or electricity to the vehicle or equipment that would otherwise require the operation of the main drive engine while the vehicle or equipment is temporarily parked or is stationary</li> </ul>	
	<ul> <li>Minimize idling time either by shutting off equipment when not in use or limit idling time to 3 minutes Signs shall be posted in the designated queuing areas and/or job sites to remind drivers and operators of the 3 minute idling limit. The construction contractor shall maintain a written idling policy and distribute it to all employees and subcontractors. The on-site construction manager shall enforce this limit.</li> </ul>	
	<ul> <li>Prohibit diesel idling within 1,000 feet of sensitive receptors.</li> </ul>	
	<ul> <li>Staging and queuing areas shall not be located within 1,000 feet of sensitive receptors.</li> </ul>	
	• The number of construction equipment operating simultaneously shall be minimized through efficient management practices to ensure that the smallest practical number is operating at any one time.	
	<ul> <li>The engine size of construction equipment shall be the minimum practical size.</li> </ul>	
	Catalytic converters shall be installed on gasoline-powered equipment.	
	• Signs shall be posted in designated queuing areas and job sites to remind drivers and operators of the idling limit.	
	• Construction worker trips shall be minimized by providing options for carpooling and by providing for lunch onsite.	
	Use new or rebuilt equipment.	
	<ul> <li>Maintain all construction equipment in proper working order, according to manufacturer's specifications. The equipment must be check by an ASE-certified mechanic and determined to be running in proper condition before it is operated.</li> </ul>	

Торіс	Measure	Applicability to the Project
	Use low rolling resistance tires on long haul class 8 tractor-trailers.	
	Suspend all construction activities that generate air pollutant emissions during air alerts.	
	• Install a CARB-verified, Level 3 emission control device, e.g., diesel particulate filters, on all diesel engines.	
Air Quality	Project-Level Mitigation Measure	This Mitigation Measure is not relevant to the Project, as the Project does not
Expose Sensitive Receptors to Pollutants	<b>MM-AIR-4(b)</b> : Consistent with the provisions of Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures that are within the jurisdiction and authority of the air quality management district(s) where proposed 2016 RTP/SCS transportation projects would be located. Where the Lead Agency has identified that a project has the potential to expose sensitive receptors to substantial pollutant concentrations and harm public health outcomes substantially, the Lead Agency can and should consider the measures that have been identified by CARB and air district(s), or other comparable measures, to reduce cancer risk pursuant to the Air Toxics "Hot Spots" Act of 1987 (AB2588), as applicable and feasible. Such measures include those adopted by CARB designed to reduce substantial pollutant concentrations, specifically diesel, from mobile sources and equipment. CARB's strategy includes the following elements:	<b>involve a 2016-2040 RTP/SCS transportation project.</b> As a mixed-use development, the Project cannot establish new regulatory standards or requirements, such as setting new engine standards or making improvements and enhancements to California's Smog Check Program. As such, there is no potential for significant effects related to this Mitigation Measure to occur.
	Set technology forcing new engine standards.	
	Reduce emissions from the in-use fleet.	
	Require clean fuels, and reduce petroleum dependency.	
	Work with US EPA to reduce emissions from federal and state sources.	
	Pursue long-term advanced technology measures	
	Proposed new transportation-related SIP measures include:	
	On-Road Sources:	
	<ul> <li>On-Road Sources:         <ul> <li>Improvements and Enhancements to California's Smog Check Program</li> <li>Expanded Passenger Vehicle Retirement</li> <li>Modifications to Reformulated Gasoline Program</li> <li>Cleaner In-Use Heavy-Duty Trucks</li> <li>Ship Auxiliary Engine Cold Ironing and Other Clean Technology Cleaner Ship Main Engines and Fuel</li> <li>Port Truck Modernization</li> <li>Accelerated Introduction of Cleaner Line-Haul Locomotives</li> <li>Clean Up Existing Commercial Harbor Craft</li> <li>Limited idling of diesel-powered trucks</li> <li>Consolidated truck trips and improve traffic flow</li> <li>Late model engines, Low emission diesel products, engine retrofit technology</li> <li>Alternative fuels for on-road vehicles</li> </ul> </li> <li>Off-Road Sources:         <ul> <li>Cleaner Construction and Other Equipment</li> <li>Cleaner In-Use Off-Road Equipment</li> <li>Agricultural Equipment Fleet Modernization</li> <li>New Emission Standards for Recreational Boats</li> </ul> </li> </ul>	

Торіс	Measure	Applicability to the Project
Biological Resources Adverse Effect on Candidate, Sensitive, or Special Status Species, Adverse Effect on Riparian Habitat or Other Sensitive Natural Community, Adverse Effect on Wetlands, Interfere with the Movement of Species, Conflict with Local Policies or Ordinances Protecting Bio	<ul> <li>Project-Level Mitigation Measure</li> <li>MM-BIO-1(b): Consistent with the provisions of Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures capable of avoiding or reducing the significant effects on threatened and endangered species and other special status species that are in the jurisdiction and responsibility of U.S. Fish and Wildlife Service, National Marine Fisheries Service, California Department of Fish and Wildlife, other public agencies, and/or Lead Agencies. Where the Lead Agency has identified that a project has the potential for significant effects, the Lead Agency can and should consider mitigation measures to ensure compliance with Sections 7, 9, and 10(a) of the federal Endangered Species Act; the California Endangered Species Act; the Native Plant Protection Act; the State Fish and Game Code; and the Desert Native Plant Act; and related applicable implementing regulations, as applicable and feasible. Additional compliance should adhere to applicable implementing regulations from the U.S. Fish and Wildlife. Such measures may include the following, or other comparable measures identified by the Lead Agency:</li> <li>Require project design to avoid occupied habitat, potentially suitable habitat, and designated critical habitat, wherever practicable and feasible.</li> </ul>	This Mitigation Measure is not relevant to the Project. The Project Site does not contain any critical habitat or support any species identified or designated as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service. The Project Site is located in an urbanized area of the City. Therefore, none of the mitigation measures that pertain to compliance with Sections 7, 9, and 10(a) of the federal Endangered Species Act; the California Endangered Species Act; the Native Plant Protection Act; the State Fish and Game ode; and the Desert Native Plant Act; and related applicable implementing regulations, are applicable to the Project. As such, there is no potential for significant effects related to this Mitigation Measure to occur.
Resources, Conflict with Habitat Conservation Plan, Natural Community Conservation Plan, or Other Conservation Plan	<ul> <li>Where avoidance is determined to be infeasible, provide conservation measures to fulfill the requirements of the applicable authorization for incidental take pursuant to Section 7 or 10(a) of the federal Endangered Species Act or Section 2081 of the California Endangered Species Act to support issuance of an Incidental take permit. A wide variety of conservation strategies have been successfully used in the SCAG region to protect the survival and recovery in the wild of federally and state-listed endangered species including the bald eagle:</li> <li>Avoidance strategies</li> </ul>	
	Contribution of in-lieu fees	
	Use of mitigation bank credits	
	Funding of research and recovery efforts	
	Habitat restoration	
	Conservation easements	
	Permanent dedication of habitat	
	Other comparable measures	
	<ul> <li>Design projects to avoid desert native plants, salvage and relocate desert native plants, and/or pay in lieu fees to support off-site long-term conservation strategies.</li> </ul>	
	• Develop and implement a Worker Awareness Program (environmental education) to inform project workers of their responsibilities in regards to avoiding and minimizing impacts on sensitive biological resources.	
	Appoint an Environmental Inspector to monitor implementation of mitigation measures.	
	<ul> <li>Schedule construction activities to avoid sensitive times for biological resources (e.g., steelhead spawning periods during the winter and spring, nesting bird season) and to avoid the rainy season when erosion and sediment transport is increased.</li> </ul>	
	• Conduct pre-construction monitoring to delineate occupied sensitive species' habitat to facilitate avoidance.	

Торіс	Measure	Applicability to the Project
	<ul> <li>Where projects are determined to be within suitable habitat of listed or sensitive species that have specific field survey protocols or guidelines outlined by the USFWS, CDFW, or other local agency, conduct preconstruction surveys that follow applicable protocols and guidelines and are conducted by qualified and/or certified personnel.</li> </ul>	
Biological Resources Adverse Effect on Riparian Habitat or Other Sensitive Natural Community, Adverse Effect on Wetlands, Interfere with the Movement of Species, Conflict with Local Policies or Ordinances Protecting Bio Resources, Conflict with Habitat Conservation Plan, Natural Community Conservation Plan, or Other Conservation Plan	<ul> <li>Project-Level Mitigation Measure</li> <li>MM-BIO-2(b): Consistent with the provisions of Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures capable of avoiding or reducing the significant impacts on state-designated sensitive habitats, including riparian habitats, that are in the jurisdiction and responsibility of U.S. Fish and Wildlife Service, the National Marine Fisheries Service, the California Department of Fish and Wildlife; and other public agencies, and/or Lead Agency. An ad Game Code, USFS Land Management Plan for the four national forests in the six-county area: Angeles, Cleveland, Los Padres, and San Bernardino, implementing regulations for the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, the California Department of Fish and Wildlife; and other related federal, state, and local regulations, as applicable and feasible. Such measures may include the following, or other comparable measures identified by the Lead Agency:</li> <li>Consult with the USFWS and NMFS where such state-designated sensitive or riparian habitats provide potential or occupied habitat for federally listed rare, threatened, and endangered species afforded protection pursuant to the federal Endangered Species Act.</li> <li>Consult with the USFW where such state-designated sensitive or riparian habitats provide potential or occupied habitat for federally listed rare, threatened, and endangered species afforded protection pursuant to the federal Endangered Species Act.</li> <li>Consult with the UDFW where such state-designated sensitive or riparian habitats provide potential or occupied habitat for state-isted dare, threatened, and endangered species afforded protection pursuant to the federal Endangered Species Act, or Fully-Protected Species afforded protection pursuant to the federal Endangered Species Act, or Fully-Protected Species afforded protection pursuant to the California habitas are occupied whith the CDFW where such state-designated sen</li></ul>	<ul> <li>The Project would be substantially in conformance with this Mitigation Measure. The Project Site is an infill site located in an urban area that is currently fully developed with urban uses. The Project Site does not contain any critical habitat or support any species identified or designated as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service. There are 19 trees on the Project Site that would be removed. Therefore, in order to substantially incorporate the MMs from the RTP/SCS the following Project-specific regulatory compliance measure (RCM BIO-1) would be implemented:</li> <li>RCM BIO-1 Proposed project activities (including disturbances to native and nonnative vegetation, structures and substrates) should take place outside of the breeding bird season which generally runs from March 1- August 31 (as early as February 1 for raptors) to avoid take (including disturbances which would cause abandonment of active nests containing eggs and/or young). Take means to hut, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, anglicant shall:</li> <li>a) Arrange for weekly bird surveys to detect any protected native birds in the habitat to be removed and any other such habitat within properties adjacent to the Project Site, as access to adjacent areas allows. The surveys shall be conducted by a qualified biologist with experience in conducting breeding bird surveys. The surveys shall continue on a weekly basis with the last survey being conducted no more than 3 days prior to the initiation of clearance/construction work.</li> <li>b) If a protected native bird is found, the applicant shall delay all clearance/construction disturbance activities within 300 feet of suitable nesting habitat is vacated and juveniles have fledged and when there is no evidence o</li></ul>

Торіс	Measure	Applicability to the Project
-	practicable and feasible.	
	• Where avoidance is determined to be infeasible, develop sufficient conservation measures through coordination with local agencies and the regulatory agency (i.e., USFWS or CDFW) to protect sensitive natural communities and riparian habitats.	
	Install fencing and/or mark sensitive habitat to be avoided during construction activities.	
	• Salvage and stockpile topsoil (the surface material from 6 to 12 inches deep) and perennial plants for use in restoring native vegetation to all areas of temporary disturbance within the project area.	
	Revegetate with appropriate native vegetation following the completion of construction activities.	
	• Complete habitat enhancement (e.g., through removal of non-native invasive wetland species and replacement with more ecologically valuable native species).	
	<ul> <li>Use Best Management Practices (BMPs) at construction sites to minimize erosion and sediment transport from the area. BMPs include encouraging growth of vegetation in disturbed areas, using straw bales or other silt-catching devices, and using settling basins to minimize soil transport.</li> </ul>	
Biological Resources	Project-Level Mitigation Measure	This Mitigation Measure is not relevant to the Project. The Project Site is not
Adverse Effect on Wetlands, Interfere with the Movement of Species, Conflict with Local Policies or Ordinances Protecting Bio Resources, Conflict	<b>MM-BIO-3(b)</b> : Consistent with the provisions of Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures capable of avoiding or reducing the significant impacts on protected wetlands that are in the jurisdiction and responsibility of the U.S. Army Corps of Engineers, public agencies and/or Lead Agencies. Where the Lead Agency has identified that a project has the potential for significant effects, the Lead Agency can and should consider mitigation measures to ensure compliance with Section 404 of the Clean Water Act and regulations of the U.S. Army Corps of Engineers (USACOE), and other applicable federal, state and local regulations, as applicable and feasible. Such measures may include the following, or other comparable measures identified by the Lead Agency:	located on protected wetlands that are in the jurisdiction and responsibility of the U.S. Army Corps of Engineers, public agencies and/or Lead Agencies. As such, there is no potential for significant effects related to this Mitigation Measure to occur.
with Habitat Conservation Plan, Natural Community	• Require project design to avoid federally protected wetlands consistent with the provisions of Section 404 of the Clean Water Act, wherever practicable and feasible.	
Natural Community Conservation Plan, or Other Conservation Plan	• Where the Lead Agency has identified that a project, or other regionally significant project, has the potential to impact other wetlands or waters not protected under Section 404 of the Clean Water Act, seek comparable coverage for these wetlands and waters in consultation with the USACOE and applicable Regional Water Quality Control Boards (RWQCB). Where avoidance is determined to be infeasible, develop sufficient conservation measures to fulfill the requirements of the applicable authorization for impacts to federally protected wetlands to support issuance of a permit under Section 404 of the Clean Water Act as administered by the USACOE. The use of an authorized Nationwide Permit or issuance of an individual permit requires the project applicant to demonstrate compliance with the USACOE's Final Compensatory Mitigation Rule. The USACOE reviews projects to ensure environmental impacts to aquatic resources are avoided or minimized as much as possible. Consistent with the administration's performance standard of "no net loss of wetlands" a USACOE permit may require a project proponent to restore, establish, enhance or preserve other aquatic resources in order to replace those affected by the Project. This compensatory mitigation process seeks to replace the loss of existing aquatic resource functions and area. Project proponents required to complete mitigation are encouraged to use a watershed approach and watershed planning information. The new rule establishes performance standards, sets timeframes for decision making, and to the extent possible, establishes equivalent requirements and standards for the three sources of compared to under standards performance standards for the three sources of compared to under the requirements or preserve other and under section making, and to the extent possible, establishes performance standards, sets timeframes for decision making, and to the extent possible, establishes equivalent requirements and standards for the three sources of compared to under section making. </td <td></td>	

Торіс	Measure	Applicability to the Project
	<ul> <li>Permitee-responsible mitigation</li> <li>Contribution of in-lieu fees</li> <li>Use of mitigation bank credits</li> </ul>	
	<ul> <li>Require review of construction drawings by a certified wetland delineator as part of each project- specific environmental analysis to determine whether wetlands will be affected and, if necessary, perform a formal wetland delineation.</li> </ul>	
Biological Resources Interfere with the Movement of Species, Conflict with Local Policies or Ordinances Protecting Bio Resources, Conflict with Habitat Conservation Plan, Natural Community Conservation Plan, or Other Conservation Plan	<ul> <li>Project-Level Mitigation Measure</li> <li>MM-BIO-4(b): Consistent with the provisions of Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures capable of avoiding or reducing the significant impacts on migratory fish or wildlife species or within established native resident and/or migratory wildlife corridors, and native wildlife nursery sites that are in the jurisdiction and responsibility of U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife, U.S. Forest Service, public agencies and/or Lead Agencies, as applicable and feasible. Where the Lead Agency has identified that a project has the potential for significant effects, the Lead Agency can and should consider mitigation measures to ensure compliance with regulations of the USFWS, USFS, CDFW, and related regulations, goals and polices of counties and cities, as applicable and feasible. Such measures may include the following, or other comparable measures identified by the Lead Agency:</li> <li>Consult with the USFWS, USFS, CDFW, and counties and cities in the SCAG region, where impacts to birds afforded protection pursuant to the Migratory Bird Treaty Act during the breeding season may occur.</li> <li>Consult with the USFS where impacts to migratory wildlife corridors may occur in an area afforded protection by an adopted Forest Land Management Plan or Resource Management Plan for the four national forests in the six-County area: Angeles, Cleveland, Los Padres, and San Bernardino.</li> <li>Consult with counties, cities, and other local organizations when impacts may occur to open space areas that baro been designed as interacted regulations when impacts may occur to open space areas that have been designed as interacted regulations when impacts may occur to open space areas that have been designed as interacted regulations and cities may occur to open space areas that have been designed as a formation and thereding season may occur.</li> </ul>	The Project would be substantially in conformance with this Mitigation Measure. The Project Site is an infill site located in an urban area that is currently fully developed with urban uses. The Project Site does not contain any critical habitat or support any species identified or designated as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service. There are 29 trees on the Project Site and 19 that would be removed. Therefore, in order to substantially incorporate the MMs from the RTP/SCS the following regulatory compliance measure (RCM BIO-1) would be required. See previously.
	<ul> <li>Prohibit construction activities within 500 feet of occupied breeding areas for wildlife afforded protection pursuant to Title 14 § 460 of the California Code of Regulations protecting fur-bearing mammals, during the breeding season.</li> <li>Prohibit clearing of vegetation and construction within the peak avian breeding season (February 1st)</li> </ul>	
	<ul> <li>Conduct weekly surveys to identify active raptor and other migratory nongame bird nests by a qualified biologist with experience in conducting breeding bird surveys within three days prior to the work in the area from February 1 through August 31.</li> </ul>	
	<ul> <li>Prohibit construction activities with 300 feet (500 feet for raptors) of occupied nests of birds afforded protection pursuant to the Migratory Bird Treaty Act, during the breeding season. Delineate the non- disturbance buffer by temporary fencing and keep the buffer in place until construction is complete or the nest is no longer active. No construction shall occur within the fenced nest zone until the young have fledged, are no longer being fed by the parents, have left the nest, and will no longer be impacted by the project. Reductions or expansions in the nest buffer distance may be appropriate depending on the avian species involved, ambient levels of human activity, screening vegetation, or possibly other factors.</li> </ul>	

Торіс	Measure	Applicability to the Project
	<ul> <li>Ensure that suitable nesting sites for migratory nongame native bird species protected under the Migratory Bird Treaty Act and/or trees with unoccupied raptor nests should only be removed prior to February 1, or following the nesting season.</li> </ul>	
	<ul> <li>Conduct site-specific analyses of opportunities to preserve or improve habitat linkages with areas on- and off-site. Analyze habitat linkages/wildlife movement corridors on a broader and cumulative impact analysis scale to avoid adverse impacts from linear projects that have potential for impacts on a broader scale or critical narrow choke points that could reduce function of recognized movement corridors on a larger scale. Require review of construction drawings and habitat connectivity mapping provided by the CDFW or CNDDB by a qualified biologist to determine the risk of habitat fragmentation.</li> </ul>	
	<ul> <li>Pursue mitigation banking to preserve habitat linkages and corridors (opportunities to purchase, maintain, and/or restore offsite habitat).</li> </ul>	
	<ul> <li>Demonstrate that Projects would not adversely affect movement of any native resident or migratory fish or wildlife species, wildlife movement corridors, or wildlife nursery sites through the incorporation of avoidance strategies into project design, wherever practicable and feasible.</li> </ul>	
	<ul> <li>Evaluate the potential for overpasses, underpasses, and culverts in cases where a roadway or other transportation project may interrupt the flow of species through their habitat. Provide wildlife crossings in accordance with proven standards, such as FHWA's Critter Crossings or Ventura County Mitigation Guidelines and in consultation with wildlife corridor authorities with sufficient knowledge of both regional and local wildlife corridors, and at locations useful and appropriate for the species of concern.</li> </ul>	
	<ul> <li>Install wildlife fencing where appropriate to minimize the probability of wildlife injury due to direct interaction between wildlife and roads or construction.</li> </ul>	
	<ul> <li>Establish native vegetation and facilitate the enhancement and maintenance of biological diversity within existing habitat pockets in urban environments that provide connectivity to large-scale habitat areas.</li> </ul>	
	<ul> <li>Where avoidance is determined to be infeasible, design sufficient conservation measures through coordination with local agencies and the regulatory agency (i.e., USFWS or CDFW) and in accordance with the respective counties and cities general plans to establish plans to mitigate for the loss of fish and wildlife movement corridors and/or wildlife nursery sites. The consideration of conservation measures may include the following measures, in addition to the measures outlined in MM-BIO-1(b), where applicable:</li> </ul>	
	<ul> <li>Wildlife movement buffer zones</li> </ul>	
	<ul> <li>Corridor realignment</li> </ul>	
	<ul> <li>Appropriately spaced breaks in center barriers</li> </ul>	
	• Stream rerouting	
	Culverts     Creation of artificial movement corridors such as freeway under, or everpasses	
	<ul> <li>Other comparable measures</li> </ul>	
	<ul> <li>Where the Lead Agency has identified that a RTP/SCS project, or other regionally significant project, has the potential to impact other open space or nursery site areas, seek comparable coverage for these areas in consultation with the USFWS, CDFW, NMFS, or other local jurisdictions.</li> </ul>	

Торіс	Measure	Applicability to the Project
	<ul> <li>Project sponsors should emphasize that urban habitats and the plant and wildlife species they support are indeed valuable, despite the fact they are located in urbanized (previously disturbed) areas. Established habitat connectivity and wildlife corridors in these urban ecosystems will likely be impacted with further urbanization, as proposed in the Project. Appropriate mitigation measures should be proposed, developed, and implemented in these sensitive urban microhabitats to support or enhance the rich diversity of urban plant and wildlife species.</li> </ul>	
	<ul> <li>Establish native vegetation within habitat pockets or the "wildling of urbanized habitats" that facilitate the enhancement and maintenance of biological diversity in these areas. These habitat pockets, as the hopscotch across an urban environment, provide connectivity to large-scale habitat areas.</li> </ul>	
Biological Resources Conflict with Local Policies or Ordinances Protecting Bio Resources, Conflict with Habitat Conservation Plan, Natural Community Conservation Plan, or	Project-Level Mitigation Measure <b>MM-BIO-5(b):</b> Consistent with the provisions of Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures capable of avoiding or reducing the significant impacts related to conflicts with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, that are in the jurisdiction and responsibility of local jurisdictions and/or Lead Agencies. Where the Lead Agency has identified that a project has the potential for significant effects, the Lead Agency can and should consider mitigation measures to comply with county, city and local policies or ordinances, protecting biological resources, such as tree preservation policies or ordinances, as applicable and feasible. Such measures may include the following, or other comparable measures identified by the	The Project would be substantially in conformance with this Mitigation Measure. There are 29 trees on the project site, none of which are designated as protected trees under the City's Tree Protection Ordinance. The project would remove 19 trees on-site (see Appendix A). No street trees would be removed, therefore no approval from the City of Los Angeles Board of Public Works would be required. As such, there is no potential for significant effects related to this Mitigation Measure to occur.
Other Conservation Plan	<ul> <li>Lead Agency:</li> <li>Consult with the appropriate local agency responsible for the administration of the policy or ordinance protecting biological resources.</li> </ul>	
	<ul> <li>Prioritize retention of trees on-site consistent with local regulations. Provide adequate protection during the construction period for any trees that are to remain standing, as recommended by a certified arborist.</li> </ul>	
	<ul> <li>If specific project area trees are designated as "Protected Trees," "Landmark Trees," or "Heritage Trees," obtain approval for encroachment or removals through the appropriate entity, and develop appropriate mitigation measures at that time, to ensure that the trees are replaced. Mitigation trees shall be locally collected native species.</li> </ul>	
	• Before the start of any clearing, excavation, construction or other work on the site, securely fence off every protected tree deemed to be potentially endangered by said site work. Keep such fences in place for duration of all such work. Clearly mark all trees to be removed. Establish a scheme for the removal and disposal of logs, brush, earth and other debris that will avoid injury to any protected tree.	
	• Where proposed development or other site work could encroach upon the protected perimeter of any protected tree, incorporate special measures to allow the roots to breathe and obtain water and nutrients. Minimize any excavation, cutting, filing, or compaction of the existing ground surface within the protected perimeter. Require that no change in existing ground level occur from the base of any protected tree at any time. Require that no burning or use of equipment with an open flame occur near or within the protected perimeter of any protected tree.	
	• Require that no storage or dumping of oil, gas, chemicals, or other substances that may be harmful to trees occur from the base of any protected trees, or any other location on the site from which such substances might enter the protected perimeter. Require that no heavy construction equipment or construction materials be operated or stored within a distance from the base of any protected trees.	

Торіс	Measure	Applicability to the Project
	Require that wires, ropes, or other devices not be attached to any protected tree, except as needed for support of the tree. Require that no sign, other than a tag showing the botanical classification, be attached to any protected tree.	
	• Thoroughly spray the leaves of protected trees with water periodically during construction to prevent buildup of dust and other pollution that would inhibit leaf transpiration.	
	<ul> <li>If any damage to a protected tree should occur during or as a result of work on the site, the appropriate local agency will be immediately notified of such damage. If, such tree cannot be preserved in a healthy state, require replacement of any tree removed with another tree or trees on the same site deemed adequate by the local agency to compensate for the loss of the tree that is removed.</li> </ul>	
	<ul> <li>Remove all debris created as a result of any tree removal work from the property within two weeks of debris creation, and such debris shall be properly disposed of in accordance with all applicable laws, ordinances, and regulations.</li> </ul>	
	Design projects to avoid conflicts with local policies and ordinances protecting biological resources.	
	• Where avoidance is determined to be infeasible, sufficient conservation measures to fulfill the requirements of the applicable policy or ordinance shall be developed, such as to support issuance of a tree removal permit. The consideration of conservation measures may include:	
	<ul> <li>Avoidance strategies</li> </ul>	
	<ul> <li>Contribution of in-lieu fees</li> </ul>	
	<ul> <li>Planting of replacement trees at a minimum ratio of 2:1</li> </ul>	
	<ul> <li>Re-landscaping areas with native vegetation post-construction</li> </ul>	
	<ul> <li>Other comparable measures</li> </ul>	
Biological Resources	Project-Level Mitigation Measure	This Mitigation Measure is not relevant to the Project. There are no locally
Conflict with Habitat Conservation Plan, Natural Community Conservation Plan, or Other Conservation Plan	<b>MM-BIO-6(b):</b> Consistent with the provisions of Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures capable of avoiding or reducing the significant impacts on HCP and NCCPs that are in the jurisdiction and responsibility of public agencies and/or Lead Agencies. Where the Lead Agency has identified that a project has the potential for significant effects, the Lead Agency can and should consider mitigation measures to ensure compliance with Section 7 or 10(a) of the federal Endangered Species Act or Section 2081 of the California Endangered Species Act; and implementing regulations, as applicable and feasible. Such measures may include the following, or other comparable measures identified by the Lead Agency:	designated natural communities are known to occur on or adjacent to the Project Site. Therefore, none of the mitigation measures that pertain to Habitat Conservation Plans or Natural Community Conservation Plans are applicable. As such, there is no potential for significant effects related to this Mitigation Measure to occur.
	• Consult with the appropriate federal, state, and/or local agency responsible for the administration of HCPs, NCCPs or other conservation programs.	
	• Wherever practicable and feasible, the project shall be designed to avoid through project design lands preserved under the conditions of an HCP, NCCP, or other conservation program.	
	<ul> <li>Where avoidance is determined to be infeasible, sufficient conservation measures to fulfill the requirements of the HCP and/or NCCP or other conservation program, which would include but not be limited to applicable authorization for incidental take pursuant to Section 7 or 10(a) of the federal Endangered Species Act or Section 2081 of the California Endangered Species Act, shall be developed to support issuance of an Incidental take permit or any other permissions required for development within the HCP/NCCP boundaries. The consideration of additional conservation measures would include the measures outlined in MM-BIO-1(b), where applicable.</li> </ul>	

Торіс	Measure	Applicability to the Project
<u>Cultural Resources</u> Potential to Destroy Unique Paleo Resources or Unique Geological Features	<u>Project-Level Mitigation Measure</u> <b>MM-CUL-1(b):</b> Consistent with the provisions of Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures capable of avoiding or reducing the significant effects on unique paleontological resources or sites and unique geologic features that are within the jurisdiction and responsibility of National Park Service, Office of Historic Preservation, and Native American Heritage Commission, other public agencies, and/or Lead Agencies. Where the Lead Agency has identified that a project has the potential for significant effects, the Lead Agency can and should consider mitigation	The Project would be in substantial conformance with this Mitigation Measure. Previously unknown paleontological resources may exist beneath the Project Site that could be uncovered during excavation activities. While the uncovering of paleontological resources is not anticipated, the City has determined that the following regulatory compliance measure, which is capable of avoiding or reducing significant impacts towards paleontological resources, are equal to or more effective than the SCAG RPT/SCS PEIR MM-CUL-1(b): <b>RCM GEO-1</b> If any paleontological materials are encountered during excavation, grading, or construction activities, work shall cease in the area of the find and a qualified paleontologit shall be secured by contacting either the Center for Public Paleontology USC, UCLA, California State University Los Angeles, California State University Long Beach, or the Los Angeles County Natural History Museum, who shall determine the significant of the resource(s). The paleontologist shall
	measures consistent with Section 15064.5 of the State CEQA Guidelines capable of avoiding or reducing significant impacts on unique paleontological resources or sites or unique geologic features. Ensure compliance with the National Historic Preservation Act, Section 5097.5 of the Public Resources Code (PRC), state programs pursuant to Sections 5024 and 5024.5 of the PRC, adopted county and city general plans, and other federal, state and local regulations, as applicable and feasible. Such measures may include the following, or other comparable measures identified by the Lead Agency:	
	<ul> <li>Obtain review by a qualified geologist or paleontologist to determine if the project has the potential to require excavation or blasting of parent material with a moderate to high potential to contain unique paleontological or resources, or to require the substantial alteration of a unique geologic feature.</li> </ul>	prepare a survey, study, or report evaluating the impact. Said survey, study, or report shall contain appropriate measure(s), as necessary, for the preservation, conservation, or relocation of the resource, and the Project Applicant shall comply with the measure(s). Project construction activities may resume in the
	<ul> <li>Avoid exposure or displacement of parent material with a moderate to high potential to yield unique paleontological resources.</li> </ul>	area of the find once copies of the paleontological survey, study, or report are submitted to the Los Angeles County Natural History Museum.
	<ul> <li>Where avoidance of parent material with a moderate to high potential to yield unique paleontological resources is not feasible:</li> </ul>	
	<ul> <li>All on-site construction personnel receive Worker Education and Awareness Program (WEAP) training to understand the regulatory framework that provides for protection of paleontological resources and become familiar with diagnostic characteristics of the materials with the potential to be encountered.</li> </ul>	
	<ul> <li>Prepare a Paleontological Resource Management Plan (PRMP) to guide the salvage, documentation and repository of representative samples of unique paleontological resources encountered during construction. If unique paleontological resources are encountered during excavation or blasting, use a qualified paleontologist to oversee the implementation of the PRMP.</li> </ul>	
	<ul> <li>Monitor blasting and earth-moving activities in parent material, with a moderate to high potential to yield unique paleontological resources using a qualified paleontologist or archeologists cross-trained in paleontology to determine if unique paleontological resources are encountered during such activities, consistent with the specified or comparable protocols.</li> </ul>	
	<ul> <li>Identify where excavation and earthmoving activity is proposed in a geologic unit having a moderate or high potential for containing fossils and specify the need for a paleontological or archeological (cross- trained in paleontology) to be present during earth-moving activities or blasting in these areas.</li> </ul>	
	<ul> <li>Avoid routes and project designs that would permanently alter unique features with archaeological and/or paleontological significance.</li> </ul>	
	<ul> <li>Salvage and document adversely affected resources sufficient to support ongoing scientific research and education.</li> </ul>	

Торіс	Measure	Applicability to the Project
Cultural Resources Substantial Adverse Change in Significance of a Historical Resource, Substantial Adverse Change in the Significance of an Archaeological Resource	Project-Level Mitigation Measure <b>MM-CUL-2(b):</b> Consistent with the provisions of Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures capable of avoiding or reducing the significant effects of on historical resources within the jurisdiction and responsibility of the Office of Historical Preservation, Native American Heritage Commission, other public agencies, and/or Local Agencies. Where the Lead Agency has identified that a project has the potential for significant effects, the Lead Agency can and should consider mitigation measures consistent with Section 15064.5 of the State CEQA Guidelines capable of avoiding or reducing significant impacts on historical resources, to ensure compliance with the National Historic Preservation Act, Section 5097.5 of the Public Resources Code (PRC), state programs pursuant to Sections 5024 and 5024.5 of the PRC, adopted county and city general plans and other federal, state and local regulations, as applicable and feasible. Such measures may include the following, or other comparable measures identified by the Lead Agency:	<ul> <li>The Project substantially conforms with this Mitigation Measure. The Project is subject to the following regulatory compliance measure, which is capable of avoiding or reducing significant impacts on archeological resources:</li> <li>RCM CUL-1 If any archaeological materials are encountered during excavation, grading, or construction activities, work shall cease in the area of the find and a qualified archaeologist shall be secured by contacting the South Central Coastal Information Center located at California State University, Fullerton, or a member of the Society of Professional Archaeologists (SOPA) or a SOPA-qualified archaeologist, who shall determine the significance of the resource(s) as defined in Section 15064.5 of the State CEQA Guidelines. The archaeologist shall prepare a survey,</li> </ul>
	<ul> <li>Pursuant to CEQA Guidelines Section 15064.5, conduct a record search at the appropriate Information Center to determine whether the project area has been previously surveyed and whether historic resources were identified.</li> </ul>	contain appropriate measure(s), as necessary, for the preservation, conservation, or relocation of the resource, and the Project Applicant shall comply with the measure(s).
<ul> <li>Obtain a qualified architectural historian to conduct historic architectural surveys as recommended by the Information Center. In the event the records indicate that no previous survey has been conducted, the Information Center will make a recommendation on whether a survey is warranted based on the sensitivity of the project area for historical resources within 1,000 feet of the project.</li> <li>Comply with Section 106 of the National Historic Preservation Act including, but not limited to, projects for which federal funding or approval is required for the individual project. This law requires federal agencies to evaluate the impact of their actions on resources included in or eligible for listing in the National Register. Federal agencies must coordinate with the State Historic Preservation Officer in evaluating impacts and developing mitigation. These mitigation measures may include, but are not limited to the following:</li> <li>Employ design measures to avoid historical resources and undertake adaptive reuse where appropriate and feasible. If resources are to be preserved, as feasible, carry out the maintenance, repair, stabilization, rehabilitation, restoration, preservation, conservation or reconstruction in a manner consistent with the Secretary of the Interior's Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings. If resources would be impacted, impacts should be minimized to the extent feasible.</li> </ul>		
	• Comply with Section 106 of the National Historic Preservation Act including, but not limited to, projects for which federal funding or approval is required for the individual project. This law requires federal agencies to evaluate the impact of their actions on resources included in or eligible for listing in the National Register. Federal agencies must coordinate with the State Historic Preservation Officer in evaluating impacts and developing mitigation. These mitigation measures may include, but are not limited to the following:	
	Where feasible, noise buffers/walls and/or visual buffers/landscaping should be constructed to preserve the contextual setting of significant built resources.	
	<ul> <li>Secure a qualified environmental agency and/or architectural historian, or other such qualified person to document any significant historical resource(s), by way of historic narrative, photographs, and architectural drawings, as mitigation for the effects of demolition of a resource.</li> </ul>	
	• Consult with the Native American Heritage Commission to determine whether known sacred sites are in the project area, and identify the Native American(s) to contact to obtain information about the project site.	
	• Prior to construction activities, obtain a qualified archaeologist to conduct a record search at the appropriate Information Center of the California Archaeological Inventory to determine whether the project area has been previously surveyed and whether resources were identified.	

Торіс	Measure	Applicability to the Project
	<ul> <li>Prior to construction activities, obtain a qualified archaeologist or architectural historian (depending on applicability) to conduct archaeological and/or historic architectural surveys as recommended by the Information Center. In the event the records indicate that no previous survey has been conducted, the Information Center will make a recommendation on whether a survey is warranted based on the sensitivity of the project area for archaeological resources.</li> </ul>	
	• If a record search indicates that the project is located in an area rich with cultural materials, retain a qualified archaeologist to monitor any subsurface operations, including but not limited to grading, excavation, trenching, or removal of existing features of the subject property.	
	<ul> <li>Conduct construction activities and excavation to avoid cultural resources (if identified). If avoidance is not feasible, further work may be needed to determine the importance of a resource. Retain a qualified archaeologist familiar with the local archaeology, and/or as appropriate, an architectural historian who should make recommendations regarding the work necessary to determine importance. If the cultural resource is determined to be important under state or federal guidelines, impacts on the cultural resource will need to be mitigated.</li> </ul>	
	• Stop construction activities and excavation in the area where cultural resources are found until a qualified archaeologist can determine the importance of these resources.	
Cultural Resources	Project-Level Mitigation Measure	The Project substantially conforms with this Mitigation Measure. The Project is
Disturb Human Remains	<b>MM-CUL-4(b):</b> Consistent with the provisions of Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures capable of avoiding or reducing the significant effects to human remains that are within the jurisdiction and responsibility of the Native American Heritage Commission, other public agencies, and/or Local Agencies. Where the Lead Agency has identified that a project has the potential for significant effects, the Lead Agency should consider mitigation measures capable of avoiding or reducing significant impacts on human remains, to ensure compliance with the California Health and Safety Code, Section 7060 and Section 18950-18961 and Native American Heritage Commission, as applicable and feasible. Such measures may include the following, or other comparable measures identified by the Lead Agency:	<ul> <li>subject to the following regulatory compliance measure, which is capable of avoiding or reducing significant impacts on unique paleontological resources:</li> <li>RCM CUL-1 If human remains are encountered unexpectedly during excavation, grading, or construction activities, State Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to California Public Resources Code Section 5097.98. In the event that human remains are discovered during said activities, the following procedure shall be observed:</li> </ul>
	<ul> <li>In the event of discovery or recognition of any human remains during construction or excavation activities associated with the project, in any location other than a dedicated cemetery, cease further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the coroner of the county in which the remains are discovered has been informed and has determined that no investigation of the cause of death is required.</li> </ul>	<ul> <li>a) Stop immediately and contact the Los Angeles County Coroner: 1104 N. Mission Road Los Angeles, CA 90033 (323) 343-0512 (8 a.m. to 5 p.m. Monday through Friday) or (323) 343-0714 (After Hours, Saturday, Sunday, and Holidays)</li> <li>If the remains are determined to be of Native American descent, the County</li> </ul>
	If any discovered remains are of Native American origin:	Coroner has 24 hours to notify the Native American Heritage Commission
	• Contact the County Coroner to contact the Native American Heritage Commission to ascertain the proper descendants from the deceased individual. The coroner should make a recommendation to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods. This may include obtaining a qualified archaeologist or team of archaeologists to properly excavate the human remains.	<ul> <li>(NAHC). In such case:</li> <li>b) The NAHC will immediately notify the person it believes to be the Most Likely Descendent (MLD) of the deceased Native American.</li> <li>c) The MLD has 48 hours to make recommendations to the owner, or representative, for the treatment or disposition, with proper dignity, of the human remains and grave goods.</li> </ul>
	<ul> <li>If the Native American Heritage Commission is unable to identify a descendant, or the descendant failed to make a recommendation within 24 hours after being notified by the commission, obtain a Native American monitor, and an archaeologist, if recommended by the Native American monitor, and rebury the Native American human remains and any associated grave goods, with appropriate dignity, on the property and in a location that is not subject to further subsurface disturbance where the following</li> </ul>	<ul> <li>d) If the owner does not accept the descendant's recommendations, owner or the descendent may request mediation by the NAHC.</li> </ul>
Торіс	Measure	Applicability to the Project
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	conditions occur:	
	The Native American Heritage Commission is unable to identify a descendent;	
	The descendant identified fails to make a recommendation; or	
	• The landowner or their authorized representative rejects the recommendation of the descendant, and the mediation by the NAHC fails to provide measures acceptable to the landowner.	
<u>Energy</u>	Project-Level Mitigation Measure	The Project substantially conforms with this Mitigation Measure. As discussed
Increase Residential Energy Use, Increase Building Energy Use	<b>MM-EN-2(b):</b> Consistent with the provisions of Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures capable of avoiding or reducing the significant effects of increased residential energy consumption that are in the jurisdiction and responsibility of public agencies and/or Lead Agencies. Where the Lead Agency has identified that a project has the potential for significant effects, the Lead Agency can and should consider mitigation measures to ensure compliance with CALGreen, local building codes, and other applicable laws and regulations governing residential building standards, as applicable and feasible. Such measures may include the following, or other comparable measures identified by the Lead Agency:	in Section II, Project Description, the proposed building would meet and/or exceed all City Building Code and Title 24 requirements. The building would incorporate eco-friendly building materials, systems, and features wherever feasible, including Energy Star®-rated appliances, water saving/low-flow fixtures, non-volatile organic compound paints/adhesives, drought-tolerant planting, and high performance building envelopment. The project would implement approximately 1,152 square feet of solar panels on the roof of the mixed-use building. The project would include electric vehicle charging systems (EVCS) as
	<ul> <li>Integrate green building measures consistent with CALGreen (California Building Code Title 24) into project design including:</li> </ul>	parking garage.
	Use energy efficient materials in building design, construction, rehabilitation, and retrofit.	
	<ul> <li>Install energy-efficient lighting, heating, and cooling systems (cogeneration); water heaters; appliances; equipment; and control systems.</li> </ul>	
	<ul> <li>Reduce lighting, heating, and cooling needs by taking advantage of light colored roofs, trees for shade, and sunlight.</li> </ul>	
	• Incorporate passive environmental control systems that account for the characteristics of the natural environment.	
	Use high-efficiency lighting and cooking devices.	
	Incorporate passive solar design.	
	Use high-reflectivity building materials and multiple glazing.	
	Prohibit gas-powered landscape maintenance equipment.	
	Install electric vehicle charging stations.	
	Reduce wood burning stoves or fireplaces.	
	Provide bike lanes accessibility and parking at residential developments.	
Geology and Soils	Project-Level Mitigation Measure	The Project already substantially conforms to this Mitigation Measure. The
Adverse Effects due to Earthquake or Other Seismic Activity, Unstable Geologic Unit or Soil, Expansive Soil	<b>MM-GEO-1(b):</b> Consistent with the provisions of Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures capable of avoiding or reducing the significant effects on the potential for projects to result in the exposure of people and infrastructure to the effects of earthquakes, seismic related ground-failure, liquefaction, and seismically induced landslides, that are in the jurisdiction and responsibility of public agencies, regulatory agencies, and/or Lead Agencies. Where the Lead Agency has identified that a project has the potential for significant effects, the Lead Agency can and should consider mitigation measures to ensure compliance with County and City Public Works and Building and Safety Department Standards, the Uniform Building Code (UBC) and the California Building Code (CBC)	Project would be required to comply with the existing seismic design provisions regulations associated with the City of Los Angeles Building Code, which incorporates the 2016 Uniform Building Code (UBC) and 2016 California Building Code (CBC). The 2016 edition of the CBC is based on the 2015 International Building Code (IBC) published by the International Code Council, which replaced the Uniform Building Code. The 2016 CBC contains California amendments based on the American Society of Civil Engineers (ASCE) Minimum Design Standard ASCE/SEI 7-16, Minimum Design Loads for Buildings and Other Structures,

Торіс	Measure	Applicability to the Project
	other applicable laws and regulations governing building standards, as applicable and feasible. Such measures may include the following, or other comparable measures identified by the Lead Agency:	provides requirements for general structural design and includes means for determining earthquake loads as well as other loads (such as wind loads) for
	<ul> <li>Consistent with Section 4.7.2 of the Alquist-Priolo Earthquake Fault Zoning Act, conduct a geologic investigation to demonstrate that proposed buildings would not be constructed across active faults. An evaluation and written report of a specific site can and should be prepared by a licensed geologist. If an active fault is found and unfit for human occupancy over the fault, place a setback of 50 feet from the fault.</li> </ul>	inclusion into building codes. Furthermore, construction would not exacerbate existing physical conditions pertaining to seismic hazards. Moreover, the Project is subject to regulatory compliance measures, which avoid and/or reduce the significant effects on the potential for projects to result in the exposure of people and infrastructure to the
	<ul> <li>Use site-specific fault identification investigations conducted by licensed geotecnnical professionals in accordance with the requirements of the Alquist-Priolo Act, as well as any applicable Caltrans regulations that exceed or reasonably replace the requirements of the Act to either determine that the anticipated risk to people and property is at or below acceptable levels or site-specific measures have been incorporated into the project design, consistent with the CBC and UBC.</li> </ul>	seismically induced landslides.
	<ul> <li>Ensure that projects located within or across Alquist-Priolo Zones comply with design requirements provided in Special Publication 117, published by the California Geological Survey, as well as relevant local, regional, state, and federal design criteria for construction in seismic areas.</li> </ul>	
	<ul> <li>Consistent with the CBC and local regulatory agencies with oversight of development associated with the Plan, ensure that projects are designed in accordance with county and city code requirements for seismic ground shaking. With respect to design, consider seismicity of the site, soil response at the site, and dynamic characteristics of the structure, in compliance with the appropriate California Building Code and State of California design standards for construction in or near fault zones, as well as all standard design, grading, and construction practices in order to avoid or reduce geologic hazards.</li> </ul>	
	<ul> <li>Consistent with the CBC and local regulatory agencies with oversight of development associated with the Plan, ensure that site-specific geotechnical investigations conducted by a qualified geotechnical expert be required prior to preparation of project designs. These investigations shall identify areas of potential expansive soils and recommend remedial geotechnical measures to eliminate any problems. Recommended corrective measures, such as structural reinforcement and replacing soil with engineered fill, shall be implemented in project designs. Geotechnical investigations identify areas of potential failure and recommend remedial geotechnical measures to eliminate any problems.</li> </ul>	
	<ul> <li>Adhere to design standards described in the CBC and all standard geotechnical investigation, design, grading, and construction practices to avoid or reduce impacts from earthquakes, ground shaking, ground failure, and landslides.</li> </ul>	
	<ul> <li>Consistent with the CBC and local regulatory agencies with oversight of development associated with the Plan, design projects to avoid geologic units or soils that are unstable, expansive soils and soils prone to lateral spreading, subsidence, liquefaction, or collapse wherever feasible.</li> </ul>	
Geology and Soils	Project-Level Mitigation Measure	The Project substantially conforms with this Mitigation Measure. The Project is
Soil Erosion or Loss of Topsoil	<b>MM-GEO-2(b):</b> Consistent with the provisions of Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures capable of avoiding or reducing the significant effects on the potential for projects to result in substantial soil erosion or the loss of topsoil, that are in the jurisdiction and	subject to regulatory compliance measures, such as the preparation of a Wet Weather Erosion Control Plan (WWECP) and a Stormwater Pollution Prevention Plan (SWPPP), in accordance with the requirements of the National
	responsibility of public agencies, regulatory agencies, and/or Lead Agencies. Where the Lead Agency has identified that a project has the potential for significant effects, the Lead Agency can and should consider mitigation measures to ensure compliance with County and City Public Works and Building and Safety Department Standards, the Uniform Building Code (UBC) and the California Building Code (CBC), and other applicable laws and regulations governing building standards, as applicable and feasible. Such	Pollutant Discharge Elimination System (NPDES) permit which are in the jurisdiction and responsibility of public agencies, regulatory agencies, and/or Lead Agencies that are capable of avoiding or reducing the Project's potential to result in substantial soil erosion or the loss of topsoil.

Торіс	Measure	Applicability to the Project
	measures may include the following, or other comparable measures identified by the Lead Agency:	
	<ul> <li>Consistent with the CBC and local regulatory agencies with oversight of development associated with the Plan, ensure that site-specific geotechnical investigations conducted by a qualified geotechnical expert are conducted to ascertain soil types prior to preparation of project designs. These investigations can and should identify areas of potential failure and recommend remedial geotechnical measures to eliminate any problems.</li> </ul>	
	<ul> <li>Consistent with the requirements of the State Water Resources Control Board (SWRCB) for projects over one acre in size, obtain coverage under the General Construction Activity Storm Water Permit (General Construction Permit) issued by the SWRCB and conduct the following:</li> </ul>	
	• File a Notice of Intent (NOI) with the SWRCB.	
	<ul> <li>Prepare a stormwater pollution prevention plan (SWPPP) and submit the plan for review and approval by the Regional Water Quality Control Board (RWQCB). At a minimum, the SWPPP should include a description of construction materials, practices, and equipment storage and maintenance; a list of pollutants likely to contact stormwater; site-specific erosion and sedimentation control practices; a list of provisions to eliminate or reduce discharge of materials to stormwater; best management practices</li> </ul>	
	(BMPs); and an inspection and monitoring program.	
	<ul> <li>Submit to the RWQCB a copy of the SWPPP and evidence of submittal of the NOI to the SWRCB. Implementation of the SWPPP should start with the commencement of construction and continue through the completion of the project.</li> </ul>	
	• After construction is completed, the project sponsor can and should submit a notice of termination to the SWRCB.	
	<ul> <li>Consistent with the requirements of the SWRCB and local regulatory agencies with oversight of development associated with the Plan, ensure that project designs provide adequate slope drainage and appropriate landscaping to minimize the occurrence of slope instability and erosion. Design features should include measures to reduce erosion caused by storm water. Road cuts should be designed to maximize the potential for revegetation.</li> </ul>	
	<ul> <li>Consistent with the CBC and local regulatory agencies with oversight of development associated with the Plan, ensure that, prior to preparing project designs, new and abandoned wells are identified within construction areas to ensure the stability of nearby soils.</li> </ul>	
Greenhouse Gases	Project-Level Mitigation Measure	The Project substantially conforms with this Mitigation Measure. As discussed
Cumulative Impacts, Forest Land Conversion	<b>MM-GHG-3(b):</b> Consistent with the provisions of Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures capable of avoiding or reducing the potential to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emission of greenhouse gases that are within the jurisdiction and authority of California Air Resources Board, local air districts, and/or Lead Agencies. Where the Lead Agency has identified that a project has the potential to conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emission of greenhouse gases, the Lead Agency can and should consider mitigation measures to mitigate the significant effects of greenhouse gas impacts to ensure compliance with all applicable laws, regulations, governing CAPs, general plans, adopted policies and plans of local agencies, and standards set forth by responsible public agencies for the purpose of greenhouse gases, a applicable and feasible. Consistent with Section 15126.4(c) of the State CEQA Guidelines, compliance can be achieved through adopting greenhouse gas mitigation measures that have been used for projects in the SCAG region as set forth below, or through	In Section VI Sustainable Communities Environmental Analysis, the project would not exceed the GHG emission threshold established by SCAQMD. As such, the project would not conflict with an applicable plan, policy, or regulation that has been adopted for reducing GHG emissions. Further, the Project complies with this Mitigation Measure because it incorporates features that would improve energy efficiency on-site and reduce the amount of GHG emissions generated by the Project. As discussed in Subsection 8 of Section IV, Sustainable Communities Environmental Analysis, through required compliance with the Los Angeles Green Building Code, the Project would be consistent with local and Statewide goals and policies aimed at reducing the generation of GHGs, including CARB's AB 32 Scoping Plan aimed at achieving 1990 GHG emission levels by 2020. Moreover

Торіс	Measure	Applicability to the Project
	comparable measures identified by Lead Agency:	as a multi-family residential project that concentrates affordable units in a TPA
	<ul> <li>Measures in an adopted plan or mitigation program for the reduction of emissions that are required as part of the Lead Agency's decision.</li> </ul>	that offers public transportation, the Project furthers the transit-oriented development and VMT reduction goals and objectives in the SCAG adopted 2016–2040 PTP/SCC. Therefore, the Project's generation of GHG emissions would not
	<ul> <li>Reduction in emissions resulting from a project through implementation of project features, project design, or other measures, such as those described in Appendix F of the State CEQA Guidelines.</li> </ul>	conflict with an applicable plan, policy, or regulation of the purposes of reducing the emissions of GHGs.
	Off-site measures to mitigate a project's emissions.	
	<ul> <li>Measures that consider incorporation of Best Available Control Technology (BACT) during design, construction and operation of projects to minimize GHG emissions, including but not limited to:</li> </ul>	
	<ul> <li>Use energy and fuel efficient vehicles and equipment. Project proponents are encouraged to meet and exceed all EPA/NHTSA/CARB standards relating to fuel efficiency and emission reduction;</li> </ul>	
	<ul> <li>Use alternative (non-petroleum based) fuels;</li> </ul>	
	<ul> <li>Deployment of zero- and/or near zero emission technologies as defined by CARB;</li> </ul>	
	<ul> <li>Use lighting systems that are energy efficient, such as LED technology;</li> </ul>	
	<ul> <li>Use the minimum feasible amount of GHG-emitting construction materials that is feasible;</li> </ul>	
	<ul> <li>Use cement blended with the maximum feasible amount of fly ash or other materials that reduce GHG emissions from cement production;</li> </ul>	
	<ul> <li>Incorporate design measures to reduce GHG emissions from solid waste management through encouraging solid waste reduction, recycling, and reuse;</li> </ul>	
	<ul> <li>Incorporate passive solar and other design measures to reduce energy consumption and increase production and use of renewable energy;</li> </ul>	
	<ul> <li>Incorporate design measures like WaterSense fixtures and water capture to reduce water consumption;</li> </ul>	
	<ul> <li>Use lighter-colored pavement where feasible;</li> </ul>	
	<ul> <li>Recycle construction debris to maximum extent feasible;</li> </ul>	
	<ul> <li>Protect and plant shade trees in or near construction projects where feasible; and</li> </ul>	
	<ul> <li>Solicit bids that include concepts listed above.</li> </ul>	
	<ul> <li>Measures that encourage transit use, carpooling, bike-share and car-share programs, active transportation, and parking strategies, including, but not limited to, transit-active transportation coordinated strategies, increased bicycle carrying capacity on transit and rail vehicles.</li> </ul>	
	<ul> <li>Incorporating bicycle and pedestrian facilities into project designs, maintaining these facilities, and providing amenities incentivizing their use; providing adequate bicycle parking and planning for and building local bicycle projects that connect with the regional network.</li> </ul>	
	<ul> <li>Improving transit access to rail and bus routes by incentives for construction of transit facilities within developments, and/or providing dedicated shuttle service to transit stations.</li> </ul>	
	<ul> <li>Adopting employer trip reduction measures to reduce employee trips such as vanpool and carpool programs, providing end-of-trip facilities, and telecommuting programs.</li> </ul>	
	<ul> <li>Designate a percentage of parking spaces for ride-sharing vehicles or high-occupancy vehicles, and provide adequate passenger loading and unloading for those vehicles.</li> </ul>	

Торіс	Measure	Applicability to the Project
	Land use siting and design measures that reduce GHG emissions, including:	
	<ul> <li>Developing on infill and brownfields sites;</li> </ul>	
	<ul> <li>Building high density and mixed use developments near transit;</li> </ul>	
	<ul> <li>Retaining on-site mature trees and vegetation, and planting new canopy trees;</li> </ul>	
	<ul> <li>Measures that increase vehicle efficiency, encourage use of zero and low emissions vehicles, or reduce the carbon content of fuels, including constructing or encouraging construction of electric vehicle charging stations or neighborhood electric vehicle networks, or charging for electric bicycles; and</li> </ul>	
	<ul> <li>Measures to reduce GHG emissions from solid waste management through encouraging solid waste recycling and reuse.</li> </ul>	
Hazards and	Project-Level Mitigation Measure	This Mitigation Measure is not relevant to the Project. The Project will not
Hazardous Materials Significant Hazard due to Routine Transport, Use, or Disposal of Hazardous Materials, Reasonably Foreseeable Upset and Accident Conditions,	<b>MM-HAZ-1(b):</b> Consistent with the provisions of Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures capable of avoiding or reducing the significant effects related to the routine transport, use or disposal of hazardous materials that are in the jurisdiction and responsibility of public agencies and/or Lead Agencies. Where the Lead Agency has identified that a project has the potential for significant effects, the Lead Agency can and should consider mitigation measures to ensure compliance with the provisions of the Hazardous Waste Control Act, the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program, the Hazardous Waste Source Reduction and Management Review Act of 1989, the California Vehicle Code, and other applicable laws and regulations, as applicable and feasible. Such measures may include the following, or other comparable measures identified by the Lead Agency:	result in the routine transport, use, or disposal of hazardous materials other than modest amounts of typical cleaning supplies and solvents used for housekeeping and janitorial purposes. Such substances would comply with State Health Codes and Regulations. Construction could involve the use of potential hazardous materials, including vehicle fuels, oils, and transmission fluids. However, all potentially hazardous materials would be contained, stored, and used in accordance with manufacturers' instructions and handled in compliance with applicable standards and regulations. As such, there is no potential for significant effects related to this Mitigation Measure to occur.
Hazardous Emissions or Materials Near School	• Where the construction or operation of projects involves the transport of hazardous material, provide a written plan of proposed routes of travel demonstrating use of roadways designated for the transport of such materials.	
	• Where the construction or operation of projects involves the transport of hazardous materials, avoid transport of such materials within one-quarter mile of schools, when school is in session, wherever feasible.	
	• Where it is not feasible to avoid transport of hazardous materials, within one-quarter mile of schools on local streets, provide notification of the anticipated schedule of transport of such materials.	
	<ul> <li>Specify the need for interim storage and disposal of hazardous materials to be undertaken consistent with applicable federal, state, and local statutes and regulations in the plans and specifications of the transportation improvement project.</li> </ul>	
	• Submit a Hazardous Materials Business/Operations Plan for review and approval by the appropriate local agency. Once approved, keep the plan on file with the Lead Agency (or other appropriate government agency) and update, as applicable. The purpose of the Hazardous Materials Business/Operations Plan is to ensure that employees are adequately trained to handle the materials and provides information to the local fire protection agency should emergency response be required. The Hazardous Materials Business/Operations Plan subjects Plan should include the following:	
	<ul> <li>The types of hazardous materials or chemicals stored and/or used on-site, such as petroleum fuel products, lubricants, solvents, and cleaning fluids.</li> </ul>	
	The location of such hazardous materials.	

Торіс	Measure	Applicability to the Project
	An emergency response plan including employee training information.	
	• A plan that describes the manner in which these materials are handled, transported and disposed.	
	<ul> <li>Specify the appropriate procedures for interim storage and disposal of hazardous materials, anticipated to be required in support of operations and maintenance activities, in conformance with applicable federal, state, and local statutes and regulations, in the Operations Manual for projects.</li> </ul>	
	<ul> <li>Follow manufacturer's recommendations on use, storage, and disposal of chemical products used in construction.</li> </ul>	
	Avoid overtopping construction equipment fuel gas tanks.	
	• During routine maintenance of construction equipment, properly contain and remove grease and oils.	
	Properly dispose of discarded containers of fuels and other chemicals.	
Hazards and Hazardous Materials Located on a Hazardous Materials Site Section 65962.5	<ul> <li>Project-Level Mitigation Measure</li> <li>MM-HAZ-4(b): Consistent with the provisions of Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures capable of avoiding or reducing the significant effects related to a project placed on a hazardous materials site, that are in the jurisdiction and responsibility of regulatory agencies, other public agencies and/or Lead Agencies. Where the Lead Agency has identified that a project has the potential for significant effects, the Lead Agency can and should consider mitigation measures to ensure compliance with the provisions of the Government Code Section 65962.5, Occupational Safety and Health Code of 197; the Response Conservation, and Recovery Act; the Comprehensive Environmental Response, Compensation, and Liability Act; the Hazardous Materials Release and Clean-up Act, and the Uniform Building Code, and County and City building standards, and all applicable federal, state, and local laws and regulations governing hazardous waste sites, as applicable and feasible. Such measures may include the following, or other comparable measures identified by the Lead Agency:</li> <li>Complete a Phase I Environmental Site Assessment, including a review and consideration of data from all known databases of contaminated sites, during the process of planning, environmental Clearance, and construction for projects.</li> <li>Where warranted due to the known presence of contaminated materials, submit to the appropriate agency responsible for hazardous materials/wastes oversight a Phase II Environmental Site Assessment report for the project should make recommendations for remedial action, if appropriate, and be signed by a Registered Environmental Site Assessment report, where such a report was determined to be necessary for the construction or operation of the project,</li> </ul>	<ul> <li>The Project substantially conforms with this Mitigation Measure. Construction of the Project would involve the temporary use of hazardous substances in the form of paint, adhesives, surface coatings and other finishing materials, and cleaning agents, fuels, and oils typically used in construction. However, all such substances and materials would be used, stored, and disposed of in accordance with applicable laws and regulations and manufacturers' instructions and are not expected to cause risk to the public or nearby schools. Upon compliance with applicable regulations, construction of the Project would not create a significant risk of exposure to hazardous materials for the public or the environment, including schools.</li> <li>The Project Site has been identified to be within a Methane Zone.<sup>1</sup> These areas pose a risk of methane intrusion emanating from geologic formations. Due to the existing potential environmental risk associated with construction in a Methane Zone, the Project would be subject to developmental regulations pertaining to ventilation and methane gas detection systems that are mandated by the City. Project development would be governed by the provisions of City of Los Angeles Building Code Chapter 71, Methane Mitigation Standards Ordinance. This ordinance provides installation procedures, design parameters and test protocols for methane gas mitigation systems. More specifically, the Methane Mitigation Standards ordinance includes requirements for site testing, methane mitigation systems, and ventilation systems.</li> </ul>
	<ul> <li>Submit a copy of all applicable documentation required by local, state, and federal environmental regulatory agencies, including but not limited to: permit applications, Phase I and II Environmental Site Assessments, human health and ecological risk assessments, remedial action plans, risk management plans, soil management plans, and groundwater management plans.</li> </ul>	on the site. However, the Phase I ESA recommended the preparation of Soil Vapor Study to determine if there are potential volatile organic compounds in soil vapor beneath the site. A Soil Vapor Study was prepared in September 2019 by Geocon West, Inc (see Appendix G). As discussed in Section VI, Sustainable Communities Environmental Analysis, benzene,

<sup>&</sup>lt;sup>1</sup> City of Los Angeles Department of City Planning Zone Information & Map Access System, website: http://zimas.lacity.org, accessed: August 2019.

Торіс	Measure	Applicability to the Project
	<ul> <li>Conduct soil sampling and chemical analyses of samples, consistent with the protocols established by the U.S. EPA to determine the extent of potential contamination beneath all underground storage tanks (USTs), elevator shafts, clarifiers, and subsurface hydraulic lifts when on-site demolition or construction activities would potentially affect a particular development or building.</li> </ul>	PCE, and chloroform in soil vapor are present in soil vapor beneath the Site at concentrations that may pose an unacceptable risk to human health of future site residents, workers, and visitors via vapor intrusion into indoor air. Therefore, HAZ-PDF-1 would be implemented, constructing a mitiging barrier below the slab to yout the upper into the
	<ul> <li>Consult with the appropriate local, state, and federal environmental regulatory agencies to ensure sufficient minimization of risk to human health and environmental resources, both during and after construction, posed by soil contamination, groundwater contamination, or other surface hazards including, but not limited to, underground storage tanks, fuel distribution lines, waste pits and sumps.</li> </ul>	outdoor air. This barrier would reduce the potential exposure to potential contaminated soils and would not expose future residents, guests, workers, and transit users to hazardous material risks.
	• Obtain and submit written evidence of approval for any remedial action if required by a local, state, or federal environmental regulatory agency.	
	• Cease work if soil, groundwater, or other environmental medium with suspected contamination is encountered unexpectedly during construction activities (e.g., identified by odor or visual staining, or if any underground storage tanks, abandoned drums, or other hazardous materials or wastes are encountered), in the vicinity of the suspect material. Secure the area as necessary and take all appropriate measures to protect human health and the environment, including but not limited to: notification of regulatory agencies and identification of the nature and extent of contamination. Stop work in the areas affected until the measures have been implemented consistent with the guidance of the appropriate regulatory oversight authority.	
	Use best management practices (BMPs) regarding potential soil and groundwater hazards.	
	<ul> <li>Soil generated by construction activities should be stockpiled on-site in a secure and safe manner. All contaminated soils determined to be hazardous or non-hazardous waste must be adequately profiled (sampled) prior to acceptable reuse or disposal at an appropriate off-site facility. Complete sampling and handling and transport procedures for reuse or disposal, in accordance with applicable local, state and federal laws and policies.</li> </ul>	
	<ul> <li>Groundwater pumped from the subsurface should be contained on-site in a secure and safe manner, prior to treatment and disposal, to ensure environmental and health issues are resolved pursuant to applicable laws and policies. Utilize engineering controls, which include impermeable barriers to prohibit groundwater and vapor intrusion into the building.</li> </ul>	
	• Prior to issuance of any demolition, grading, or building permit, submit for review and approval by the Lead Agency (or other appropriate government agency) written verification that the appropriate federal, state and/or local oversight authorities, including but not limited to the Regional Water Quality Control Board (RWQCB), have granted all required clearances and confirmed that the all applicable standards, regulations, and conditions have been met for previous contamination at the site.	
	• Develop, train, and implement appropriate worker awareness and protective measures to assure that worker and public exposure is minimized to an acceptable level and to prevent any further environmental contamination as a result of construction.	
	• If asbestos-containing materials (ACM) are found to be present in building materials to be removed, submit specifications signed by a certified asbestos consultant for the removal, encapsulation, or enclosure of the identified ACM in accordance with all applicable laws and regulations, including but not necessarily limited to: California Code of Regulations, Title 8; Business and Professions Code; Division 3; California Health and Safety Code Section 25915- 25919.7; and other local regulations.	
	• Where projects include the demolitions or modification of buildings constructed prior to 1968,	

Торіс	Measure	Applicability to the Project
	complete an assessment for the potential presence or lack thereof of ACM, lead-based paint, and any other building materials or stored materials classified as hazardous waste by state or federal law.	
	<ul> <li>Where the remediation of lead-based paint has been determined to be required, provide specifications to the appropriate agency, signed by a certified Lead Supervisor, Project Monitor, or Project Designer for the stabilization and/or removal of the identified lead paint in accordance with all applicable laws and regulations, including but not necessarily limited to: California Occupational Safety and Health Administration's (Cal OSHA's) Construction Lead Standard, Title 8 California Code of Regulations (CCR) Section 1532.1 and Department of Health Services (DHS) Regulation 17 CCR Sections 35001–36100, as may be amended. If other materials classified as hazardous waste by state or federal law are present, the project sponsor should submit written confirmation to the appropriate local agency that all state and federal laws and regulations should be followed when profiling, handling, treating, transporting, and/or disposing of such materials.</li> </ul>	
	<ul> <li>Where a project site is determined to contain materials classified as hazardous waste by state or federal law are present, submit written confirmation to appropriate agency that all state and federal laws and regulations should be followed when profiling, handling, treating, transporting, and/or disposing of such materials.</li> </ul>	
Hazards and	Project-Level Mitigation Measure	This Mitigation Measure is not relevant to the Project. The Project Site is
Wildland Fire Risk	<b>MM-HAZ-8(b):</b> Consistent with the provisions of Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures capable of avoiding or reducing the significant effects from the potential exposure of people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands; that are in the jurisdiction and responsibility of public agencies and/or Lead Agencies. Where the Lead Agency has identified that a project has the potential for significant effects, the Lead Agency can and should consider mitigation measures to ensure compliance with local general plans, specific plans, and regulations provided by County and City fire departments, as applicable and feasible. Such measures may include the following, or other comparable measures identified by the Lead Agency:	Furthermore, the Project is subject to regulatory compliance measures, such as adherence to fire code requirements. As such, there is no potential for significant effects related to this Mitigation Measure to occur.
	<ul> <li>Adhere to fire code requirements, including ignition-resistant construction with exterior walls of noncombustible or ignition resistant material from the surface of the ground to the roof system. Other fire-resistant measures would be applied to eaves, vents, windows, and doors to avoid any gaps that would allow intrusion by flame or embers.</li> </ul>	
	<ul> <li>Adhere to the Multi-Jurisdictional Hazards Mitigation Plan, as well as local general plans, including policies and programs aimed at reducing the risk of wildland fires through land use compatibility, training, sustainable development, brush management, and public outreach.</li> </ul>	
	<ul> <li>Encourage the use of fire-resistant vegetation native to Southern California and/or to the local microclimate (e.g., vegetation that has high moisture content, low growth habits, ignition-resistant foliage, or evergreen growth), eliminate brush and chaparral, and discourage the use of fire-promoting species especially non-native, invasive species (e.g., pampas grass, fennel, mustard, or the giant reed) in the immediate vicinity of development in areas with high fire threat.</li> </ul>	
	<ul> <li>Encourage natural revegetation or seeding with local, native species after a fire and discourage reseeding of non-native, invasive species to promote healthy, natural ecosystem regrowth. Native vegetation is more likely to have deep root systems that prevent slope failure and erosion of burned areas than shallow-rooted non-natives.</li> </ul>	
	• Submit a fire safety plan (including phasing) to the Lead Agency and local fire agency for their review	

Торіс	Measure	Applicability to the Project
	and approval. The fire safety plan shall include all of the fire safety features incorporated into the project and the schedule for implementation of the features. The local fire protection agency may require changes to the plan or may reject the plan if it does not adequately address fire hazards associated with the project as a whole or the individual phase.	
	• Utilize Fire-wise Land Management by encouraging the use of fire-resistant vegetation and the elimination of brush and chaparral in the immediate vicinity of development in areas with high fire threat.	
	• Promote Fire Management Planning that would help reduce fire threats in the region as part of the Compass Blueprint process and other ongoing regional planning efforts.	
	• Encourage the use of fire-resistant materials when constructing projects in areas with high fire threat.	
Hydrology and Water	Project-Level Mitigation Measure	The Project substantially conforms with this Mitigation Measure. The Project
Quality Violate Water Quality Standards or Waste Discharge Requirements, Alteration of Site Drainage Pattern, Runoff Exceeding Stormwater Drainage System Capacity,	<b>MM-HYD-1(b):</b> Consistent with the provisions of Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures capable of avoiding or reducing the potential impacts on water quality on related waste discharge requirements that are within the jurisdiction and authority of the Regional Water Quality Control Boards and other regulatory agencies. Where the Lead Agency has identified that a project has the potential for significant effects, the Lead Agency can and should consider mitigation measures to ensure compliance with all applicable laws, regulations, and health and safety standards set forth by regulatory agencies responsible for regulating and enforcing water quality and waste discharge requirements in a manner that conforms with applicable water quality standards and/or waste discharge requirements, as applicable and feasible. Such measures may include the following, or other comparable measures identified by the Lead Agency:	would comply with waste discharge requirements that are within the jurisdiction and authority of the Regional Water Quality Control Board, the City of Los Angeles Low Impact Development (LID) Ordinance and other regulatory agency requirements including, but not limited to, the National Pollution Discharge Elimination System (NPDES) permitting Requirements. The Project substantially conforms with this Mitigation Measure because the Project is subject to regulatory compliance measures that are capable of avoiding or reducing the potential impacts on water quality.
Otherwise Degrade Water Quality	• Complete, and have approved, a Stormwater Pollution Prevention Plan (SWPPP) prior to initiation of construction.	
	• Implement Best Management Practices to reduce the peak stormwater runoff from the project site to the maximum extent practicable.	
	• Comply with the Caltrans storm water discharge permit as applicable; and identify and implement Best Management Practices to manage site erosion, wash water runoff, and spill control.	
	Complete, and have approved, a Standard Urban Stormwater Management Plan, prior to occupancy of residential or commercial structures.	
	• Ensure adequate capacity of the surrounding stormwater system to support stormwater runoff from new or rehabilitated structures or buildings.	
	• Prior to construction within an area subject to Section 404 of the Clean Water Act, obtain all required permit approvals and certifications for construction within the vicinity of a watercourse:	
	<ul> <li>U.S. Army Corps of Engineers (Corps): Section 404. Permit approval from the Corps should be obtained for the placement of dredge or fill material in Waters of the U.S., if any, within the interior of the project site, pursuant to Section 404 of the federal Clean Water Act.</li> </ul>	
	<ul> <li>Regional Walter Quality Control Board (RWQCB): Section 401 Water Quality Certification. Certification that the project will not violate state water quality standards is required before the Corps can issue a 404 permit, above.</li> </ul>	
	<ul> <li>California Department of Fish and Wildlife (CDFW): Section 1602 Lake and Streambed Alteration Agreement. Work that will alter the bed or bank of a stream requires authorization from CDFW.</li> </ul>	

Торіс	Measure	Applicability to the Project
	• Where feasible, restore or expand riparian areas such that there is no net loss of impervious surface as a result of the project.	
	<ul> <li>Install structural water quality control features, such as drainage channels, detention basins, oil and grease traps, filter systems, and vegetated buffers to prevent pollution of adjacent water resources by polluted runoff where required by applicable urban storm water runoff discharge permits, on new facilities.</li> </ul>	
	• Provide structural storm water runoff treatment consistent with the applicable urban storm water runoff permit. Where Caltrans is the operator, the statewide permit applies.	
	<ul> <li>Provide operational best management practices for street cleaning, litter control, and catch basin cleaning are implemented to prevent water quality degradation in compliance with applicable storm water runoff discharge permits; and ensure treatment controls are in place as early as possible, such as during the acquisition process for rights-of-way, not just later during the facilities design and construction phase.</li> </ul>	
	<ul> <li>Comply with applicable municipal separate storm sewer system discharge permits as well as Caltrans' storm water discharge permit including long-term sediment control and drainage of roadway runoff.</li> </ul>	
	<ul> <li>Incorporate as appropriate treatment and control features such as detention basins, infiltration strips, and porous paving, other features to control surface runoff and facilitate groundwater recharge into the design of new transportation projects early on in the process to ensure that adequate acreage and elevation contours are provided during the right-of-way acquisition process.</li> </ul>	
	<ul> <li>Design projects to maintain volume of runoff, where any downstream receiving water body has not been designed and maintained to accommodate the increase in flow velocity, rate, and volume without impacting the water's beneficial uses. Pre-project flow velocities, rates, and volumes must not be exceeded. This applies not only to increases in storm water runoff from the project site, but also to hydrologic changes induced by flood plain encroachment. Projects should not cause or contribute to conditions that degrade the physical integrity or ecological function of any downstream receiving waters.</li> </ul>	
	<ul> <li>Provide culverts and facilities that do not increase the flow velocity, rate, or volume and/or acquiring sufficient storm drain easements that accommodate an appropriately vegetated earthen drainage channel.</li> </ul>	
	<ul> <li>Upgrade stormwater drainage facilities to accommodate any increased runoff volumes. These upgrades may include the construction of detention basins or structures that will delay peak flows and reduce flow velocities, including expansion and restoration of wetlands and riparian buffer areas. System designs shall be completed to eliminate increases in peak flow rates from current levels.</li> </ul>	
	<ul> <li>Encourage Low Impact Development (LID) and incorporation of natural spaces that reduce, treat, infiltrate and manage stormwater runoff flows in all new developments, where practical and feasible.</li> </ul>	
	<ul> <li>If a Project has the potential to create a major new stormwater discharge to a water body with an established Total Maximum Daily Load (TMDL), a quantitative analysis of the anticipated pollutant loads in the stormwater discharges to the receiving waters should be carried out.</li> </ul>	

Торіс	Measure	Applicability to the Project
Hydrology and Water Quality Deplete Groundwater Supply or Interfere with Groundwater Recharge	<ul> <li>Project-Level Mitigation Measure</li> <li>MM-HYD-2(b): Consistent with the provisions of the Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures capable of avoiding or reducing the potential impacts to groundwater resources that are within the jurisdiction and authority of the State Water Resources Control Board, Regional Water Quality Control Boards, Water Districts, and other groundwater management agencies. Where the Lead Agency has identified that a project has the potential for significant effects, the Lead Agency can and should consider mitigation measures to ensure compliance with applicable laws, regulations, and health and safety standards set forth by federal, state, regional, and local authorities that regulate groundwater management, consistent with the provisions of the Groundwater Management Act and implementing regulations, including recharge in a manner that conforms with federal, state, regional, and local standards for sustainable management of groundwater basins, as applicable and feasible. Such measures may include the following, or other comparable measures identified by the Lead Agency:</li> <li>For projects requiring continual dewatering facilities, implement monitoring systems and long-term administrative procedures to ensure proper water management that prevents degrading of surface water and minimizes, to the greatest extent possible, adverse impacts on groundwater for the life of the project, Construction designs shall comply with appropriate building codes and standard practices including the Uniform Building Code.</li> <li>Maximize, where practical and feasible, permeable surface area in existing urbanized areas to protect water quality, reduce flooding, allow for groundwater recharge, and preserve wildlife habitat. Minimize to the greatest extent possible, new impervious surfaces, including the use of in-lieu fees and off-site mitigation.</li> </ul>	Applicability to the Project The Project substantially conforms with this Mitigation Measure. The Project Site is located in an urbanized area that does not contain any significant groundwater recharge areas. Based on the Geotechnical Investigation, Appendix F, prepared for the Project, dewatering during construction and operation of the Project is not anticipated due to the current depth of the groundwater table. As such, there is no potential for significant effects related to this Mitigation Measure to occur.
	<ul> <li>Avoid designs that require continual dewatering where feasible.</li> <li>Avoid construction and siting on groundwater recharge areas, to prevent conversion of those areas to impervious surface.</li> </ul>	
	<ul> <li>Reduce hardscape to the extent feasible to facilitate groundwater recharge as appropriate.</li> </ul>	
Hydrology and Water Quality Structures within a 100-Year Floodplain Hazard Area, Risk due to Levee or Dam Failure, Risks due to Seiche, Tsunami, or Mudflow	<ul> <li>Project-Level Mitigation Measure</li> <li>MM-HYD-8(b): Consistent with the provisions of Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures capable of avoiding or reducing the potential impacts of locating structures that would impede or redirect flood flows in a 100-year flood hazard area that are within the jurisdiction and authority of the Flood Control District, County Public Works Departments, local agencies, regulatory agencies, and/or Lead Agency can and should consider mitigation measures to ensure compliance with all federal, state, and local floodplain regulations, consistent with the provisions of the National Flood Insurance Program, as applicable and feasible. Such measures may include the following, or other comparable measures identified by the Lead Agency:</li> <li>Comply with Executive Order 11988 on Floodplain Management, which requires avoidance of incompatible floodplain development, restoration and preservation of the National Flood Insurance Program.</li> <li>Ensure that all roadbeds for new highway and rail facilities be elevated at least one foot above the 100-year base flood elevation. Since alluvial fan flooding is not often identified on FEMA flood maps, the</li> </ul>	This Mitigation Measure is not relevant to the Project. The Project Site is not, according to the Federal Emergency Management Agency (FEMA) flood insurance rate map, located within a designated flood zone. As such, there is no potential for significant effects related to this Mitigation Measure to occur.

Торіс	Measure	Applicability to the Project
	flooding. Delineation of floodplains and alluvial fan boundaries should attempt to account for future hydrologic changes caused by global climate change.	
Land Use and Planning Conflict with Applicable Land Use Plan, Policy, or Regulation	<ul> <li><u>Project-Level Mitigation Measure</u></li> <li><b>MM-LU-1(b)</b>: Consistent with the provisions of Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures capable of avoiding or reducing the significant effects regarding the potential to conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project that are within the jurisdiction and responsibility of local jurisdictions and Lead Agencies. Where the Lead Agency has identified that a project has the potential for significant effects, the Lead Agency can and should consider mitigation measures to ensure compliance with the goals and policies established within the applicable adopted county and city general plans within the SCAG region to avoid conflicts with zoning and ordinance codes, general plans, land use plan, policy, or regulation of an agency with jurisdiction over the project, as applicable and feasible. Such measures may include the following, and/or other comparable measures identified by the Lead Agency:</li> <li>Where an inconsistency with the adopted general plan is identified at the Project location, determine if the environmental, social, economic, and engineering benefits of the project warrant a variance from adopted zoning or an amendment to the general plan.</li> </ul>	The Project substantially conforms with this Mitigation Measure. As part of the Project, the Applicant requests a General Plan Amendment per Los Angeles Municipal Code (LAMC) LAMC Section 11.5.6 to change the parcels designated as Low Medium II Residential to Highway Oriented Commercial /Limited Commercial. Additionally, the Applicant requests a JJJ compliant Vesting Zone Change per LAMC Section 12.32 Q to change the existing Project Site zones of C2-1-CUGU and RD1.5-1-CUGU to [T][Q]C2-1-CUGU. C2 Zone is permitted commercial uses listed in LAMC Section 12.14 and residential density of the R4 Zone per LAMC Section 12.11. Approval of the Project's proposed mixed-uses compared to the surrounding area or existing uses on-site. Additionally, the Project already substantially complies with this Mitigation Measure because, as analyzed and discussed in Section VI, Sustainable Communities Environmental Analysis, it does not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project that are within the jurisdiction and responsibility of local jurisdictions and Lead Agencies. As such, there is no potential for significant effects related to this Mitigation Measure because.
<u>Land Use and</u> <u>Planning</u> Physically Divide a Community	Project-Level Mitigation Measure <b>MM-LU-2(b):</b> Consistent with the provisions of Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures capable of avoiding or reducing the significant effects related to the physical division of an established community in a project area within the jurisdiction and responsibility of local jurisdictions and Lead Agencies. Where the Lead Agency has identified that a project has the potential for significant effects, the Lead Agency can and should consider mitigation measures to ensure compliance with the goals and policies established within the applicable adopted county and city general plans within the SCAG region to avoid the creation of barriers that physically divide such communities, as applicable and feasible. Such measures may include the following, or other comparable measures identified by the Lead Agency:	The Project substantially conforms with this Mitigation Measure. The Project would not cause any permanent street closures or block access to any surrounding land use. Since the Project would be developed within a long established developed urban area along an existing street grid system, the Project would not physically divide an established community by creating new streets or by blocking or changing the existing street grid pattern. As such, there is no potential for significant effects related to this Mitigation Measure to occur.
	<ul> <li>Consider alignments within or adjacent to existing public rights-or-way.</li> <li>Consider designs to include sections above- or below-grade to maintain viable vehicular, cycling, and pedestrian connections between portions of communities where existing connections are disrupted by the transportation project.</li> </ul>	
	<ul> <li>Wherever feasible incorporate direct crossings, overcrossings, or undercrossings at regular intervals for multiple modes of travel (e.g., pedestrians, bicyclists, vehicles).</li> </ul>	
	<ul> <li>Consider realigning roadway or interchange improvements to avoid the affected area of residential communities or cohesive neighborhoods.</li> </ul>	
	<ul> <li>Where it has been determined that it is infeasible to avoid creating a barrier in an established community, consider other measures to reduce impacts, including but not limited to:</li> </ul>	
	Alignment shifts to minimize the area affected.	
	<ul> <li>Reduction of the proposed right-of-way take to minimize the overall area of impact.</li> </ul>	

Торіс	Measure	Applicability to the Project
	• Provisions for bicycle, pedestrian, and vehicle access across improved roadways.	
	<ul> <li>Design new transportation facilities that consider access to existing community facilities. Identify and consider during the design phase of the project, community amenities and facilities in the design of the project.</li> </ul>	
	<ul> <li>Design roadway improvements that minimize barriers to pedestrians and bicyclists. Determine during the design phase, pedestrian and bicycle routes that permit connections to nearby community facilities.</li> </ul>	
Mineral Resources	Project-Level Mitigation Measure	This Mitigation Measure is not relevant to the Project. The Project Site is fully
Loss of Availability of a Known Mineral Resource	<b>MM-MIN-1(b):</b> Consistent with the provisions of Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures capable of avoiding or reducing the significant effects on the loss of availability of a known mineral resource that would be of value to the region and the residents of the state or a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan that are within the jurisdiction and responsibility of the California Department of Conservation, and/or Lead Agencies.	developed and no oil wells are present. There are no oil extraction operations and drilling or mining of mineral resources at the Project Site, nor is the Project Site within an area identified for such uses. As such, there is no potential for significant effects related to this Mitigation Measure to occur.
	Where the Lead Agency has identified that a project has the potential for significant effects, the Lead Agency can and should consider mitigation measures to ensure compliance with SMARA, California Department of Conservation regulations, local general plans, specific plans, and other laws and regulation governing mineral or aggregate resources, as applicable and feasible. Such measures may include the following, other comparable measures identified by the Lead Agency:	
	<ul> <li>Provide for the efficient use of known aggregate and mineral resources or locally important mineral resource recovery sites, by ensuring that the consumptive use of aggregate resources is minimized and that access to recoverable sources of aggregate is not precluded, as a result of construction, operation and maintenance of projects.</li> </ul>	
	<ul> <li>Where avoidance is infeasible, minimize impacts to the efficient and effective use of recoverable sources of aggregate through measures that have been identified in county and city general plans, or other comparable measures:</li> </ul>	
	<ul> <li>Recycle and reuse building materials resulting from demolition, particularly aggregate resources, to the maximum extent practicable.</li> </ul>	
	<ul> <li>Identify and use building materials, particularly aggregate materials, resulting from demolition at other construction sites in the SCAG region, or within a reasonable hauling distance of the project site.</li> </ul>	
	<ul> <li>Design transportation network improvements in a manner (such as buffer zones or the use of screening) that does not preclude adjacent or nearby extraction of known mineral and aggregate resources following completion of the improvement and during long-term operations.</li> </ul>	
	<ul> <li>Avoid or reduce impacts on known aggregate and mineral resources and mineral resource recovery sites through the evaluation and selection of project sites and design features (e.g., buffers) that minimize impacts on land suitable for aggregate and mineral resource extraction by maintaining portions of MRZ- 2 areas in open space or other general plan land use categories and zoning that allow for mining of mineral resources.</li> </ul>	

Торіс	Measure	Applicability to the Project
Noise Exposure of Persons to Noise in Excess of Local Standards, Excessive Groundborne Vibration or Noise Levels, Substantial Permanent Increase in Noise Level, Substantial Temporary Increase	Project-Level Mitigation Measure <b>MM-NOISE-1(b):</b> Consistent with the provisions of Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures capable of avoiding or reducing the significant effects of noise impacts that are in the jurisdiction and responsibility of public agencies and/or Lead Agencies. Where the Lead Agency has identified that a project has the potential for significant effects, the Lead Agency can and should consider mitigation measures to ensure consistency with the Federal Noise Control Act, California Government Code Section 65302, the Governor's Office of Planning and Research Noise Element Guidelines, and the noise ordinances and general plan noise elements for the counties or cities where projects are undertaken, Federal Highway Administration and Caltrans guidance documents and other health and safety standards set forth by federal, state, and local authorities that regulate noise levels, as applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency:	<b>Applicability to the Project</b> <b>The Project would substantially conform to this Mitigation Measure.</b> The City is required to comply with regulatory control measures in LAMC Section 41.40 and Section 112.05, which regulate noise from construction activities, in City of Los Angeles Building Regulations Ordinance No. 178,048, which require a construction site notice to be provided, in LAMC Section 112.02, which require that any heating, ventilation, and air conditioning (HVAC) system within any zone of the City not cause an increase in ambient noise levels on any other occupied property, and in LAMC Section 114.03, which prohibit loading/unloading activities within 200 feet of any residential building between the hours of 10:00 p.m. and 7:00 a.m. of the following day. As such, the Project would include the following regulatory compliance measures per LAMC 41.40 and 112.05:
in Noise Levels	<ul> <li>Install temporary noise barriers during construction.</li> <li>Include permanent noise barriers and sound-attenuating features as part of the project design.</li> <li>Schedule construction activities consistent with the allowable hours pursuant to applicable general plan noise element or noise ordinance Where construction activities are authorized outside the limits established by the noise element of the general plan or noise ordinance, notify affected sensitive noise researchers and all parties who will experience paice levels in excess of the allowable limits for the constituent of the general plan or noise ordinance.</li> </ul>	<ul> <li>RCM NOI-1 The Project shall comply with the City of Los Angeles Noise Ordinance No. 144,331 and 161,574 (see LAMC Section 112.05), and any subsequent ordinances, which prohibit the emission or creation of noise beyond certain levels.</li> <li>RCM NOI-2 Construction shall be restricted to the hours of 7:00 AM to 9:00 PM Monday through Friday, and 8:00 AM to 6:00 PM on Saturday.</li> </ul>
receptors and all parties who will experience noise levels in excess of the land use, of the level of exceedance and duration of exceedance; and pro- that can be undertaken by the individual, including temporary relocati devices.	<ul> <li>land use, of the level of exceedance and duration of exceedance; and provide a list of protective measures that can be undertaken by the individual, including temporary relocation or use of hearing protective devices.</li> <li>Limit speed and/or hours of operation of rail and transit systems during the selected periods of time to</li> </ul>	<b>RCM NOI-3</b> Construction activities shall be scheduled so as to avoid operating several pieces of equipment simultaneously, which causes high noise levels. <b>RCM NOI-4</b> Noise-generating equipment operated at the Project Site shall be equipped with the most effective and technologically feasible noise control devices such as muffler.
	<ul> <li>reduce duration and frequency of conflict with adopted limits on noise levels.</li> <li>Post procedures and phone numbers at the construction site for notifying the Lead Agency staff, local Police Department, and construction contractor (during regular construction hours and off-hours), along with permitted construction days and hours, complaint procedures, and who to notify in the event of a problem.</li> </ul>	enclosures. All equipment shall be properly maintained to assure that no additional noise, due to worn or improperly maintained parts, would be generated. <b>RCM NOI-5</b> Noise and groundborne vibration construction activities whose specific location on the site may be flexible (e.g., operation of compressors and
	• Notify neighbors and occupants within 300 feet of the project construction area at least 30 days in advance of anticipated times when noise levels are expected to exceed limits established in the noise element of the general plan or noise ordinance.	generators, cement mixing, general truck idling) shall be conducted as far a possible from the nearest noise- and vibration-sensitive land uses, and natura and/or manmade barriers (e.g., intervening construction trailers) shall be used
	• Hold a preconstruction meeting with the job inspectors and the general contractor/on-site project manager to confirm that noise measures and practices (including construction hours, neighborhood notification, posted signs, etc.) are completed.	to screen propagation of noise from such activities towards these land uses to the maximum extent possible. <b>RCM NOI-6</b> Barriers such as, but not limited to, plywood structures or flexible
	Designate an on-site construction complaint and enforcement manager for the project.	sound control curtains shall be erected around the perimeter of the
	• Ensure that construction equipment are properly maintained per manufacturers' specifications and fitted with the best available noise suppression devices (e.g., mufflers, silencers, wraps). All intake and exhaust ports on power equipment shall be muffled or shielded.	construction site, and around stationary equipment as feasible (i.e., generators, air compressors, etc.), to minimize the amount of noise during construction on the nearby noise-sensitive uses. Perimeter barriers shall be at least 8 feet in height and constructed of materials achieving a Transmission Loss (TL) value of
	• Ensure that impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project	at least 20 dBA, such as 1/2 inch plywood. <sup>2</sup>

<sup>&</sup>lt;sup>2</sup> Based on the FHWA Noise Barrier Design Handbook (July 14, 2011), see Table 3, Approximate sound transmission loss values for common materials.

Торіс	Measure	Applicability to the Project
	<ul> <li>construction are hydraulically or electrically powered to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust can and should be used. External jackets on the tools themselves can and should be used, if such jackets are commercially available and this could achieve a reduction of 5 dBA. Quieter procedures can and should be used, such as drills rather than impact equipment, whenever such procedures are available and consistent with construction procedures.</li> <li>Ensure that construction equipment are not idle for an extended time in the vicinity of noise-sensitive receptors.</li> </ul>	<b>RCM NOI-7</b> The Project shall comply with the City of Los Angeles Building Regulations Ordinance No. 178,048 (see LAMC Section 91.106.4.8), which requires a construction site notice to be provided that includes the following information: job site address, permit number, name and phone number of the contractor and owner or owner's agent, hours of construction allowed by code or any discretionary approval for the site, and City telephone numbers where violations can be reported. The notice shall be posted and maintained at the construction site prior to the start of construction and displayed in a location that is readily visible to the public.
	<ul> <li>as far as possible from noise-sensitive receptors.</li> <li>Locate new roadway lanes, roadways, rail lines, transit-related passenger station and related facilities, park and ride late, and other new poise generating facilities away from sensitive recentors to the</li> </ul>	The above RCMs would also serve to reduce groundborne vibration impacts along with the following regulatory compliance measure:
	<ul> <li>Where feasible, eliminate noise-sensitive receptors by acquiring freeway and rail rights-of-way.</li> <li>Use noise barriers to protect sensitive receptors from excessive noise levels during construction.</li> </ul>	91.3307.1 (Protection Required) of the LAMC and Section 832 of the Civil Code of California. Compliance with these standards will ensure all adjacent property shall be protected from damage during construction. The Project Applicant shall complete a structural monitoring program for the adjacent uses during
	<ul> <li>Construct sound-reducing barriers between noise sources and noise-sensitive receptors to minimize exposure to excessive noise during operation of transportation improvement projects, including but not limited to earth-berms or sound walls.</li> <li>Where feasible, design projects so that they are depressed below the grade of the existing noise-sensitive receptor, creating an effective barrier between the roadway and sensitive receptors.</li> <li>Where feasible, improve the acoustical insulation of dwelling units where setbacks and sound barriers do not provide sufficient noise reduction.</li> <li>Monitor the offectiveness of noise reduction measures by taking noise measurements and installing</li> </ul>	<ul> <li>construction including the following steps and procedures:</li> <li>Prior to start of construction, the Applicant shall retain the services of structural engineer to visit the adjacent uses to inspect and document t apparent physical condition of the buildings, including but not limited to t building structure, interior walls, and ceiling finishes. In addition, t structural engineer shall establish baseline structural conditions of t buildings and prepare a shoring design.</li> <li>The Applicant shall retain the services of a qualified acoustical engineer</li> </ul>
	<ul> <li>Monitor the effectiveness of noise reduction measures by taking noise measurements and installing adaptive mitigation measures to achieve the standards for ambient noise levels established by the noise element of the general plan or noise ordinance.</li> </ul>	review proposed construction equipment and develop and implement a vibration monitoring program capable of documenting the construction- related ground vibration levels at the building during construction. The vibration monitoring system shall measure and continuously store the peak particle velocity (PPV) in inch/second. Vibration data shall be stored on a one-second interval. The system shall also be programmed for two preset velocity levels: a warning level of 0.17 inch/second (PPV), and a regulatory level of 0.20 inch/second (PPV). The system shall also provide real-time alert when the vibration levels exceed the two preset levels.
		• In the event the warning levels above are triggered, the contractor shall identify the source of vibration generation and provide feasible steps to reduce the vibration level, including but not limited to halting/staggering concurrent activities and utilizing lower vibratory techniques.
		<ul> <li>In the event the regulatory levels above are triggered, the contractor shall halt the construction activities in the vicinity of the building and visually inspect the building for any damage. Results of the inspection must be logged. The contractor shall identify the source of vibration generation and provide feasible steps to reduce the vibration level. Construction activities may then restart.</li> </ul>

Торіс	Measure	Applicability to the Project
		• In the event damage occurs to an adjacent use due to construction vibration, such materials shall be repaired and restored to previous condition as feasible.
<u>Noise</u> Exposure of Persons to Excessive Groundborne Vibration or Noise Levels	<ul> <li><u>Project-Level Mitigation Measure</u></li> <li><b>MM-NOISE-2(b):</b> Consistent with the provisions of Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures capable of avoiding or reducing the significant effects of vibration impacts that are in the jurisdiction and responsibility of public agencies and/or Lead Agencies. Where the Lead Agency has identified that a project has the potential for significant effects, the Lead Agency can and should consider mitigation measures to ensure compliance with the Federal Transportation Authority and Caltrans guidance documents, county or city transportation commission, noise and vibration ordinances and general plan noise elements for the counties and cities where projects are undertaken and other health and safety regulations set forth by federal state, and local authorities that regulate vibration levels, as applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency:</li> <li>For projects that require pile driving or other construction techniques that result in excessive vibration, such as blasting, determine the potential vibration impacts to the structural integrity of the adjacent</li> </ul>	The Project would substantially conform to this Mitigation Measure. The City is required to comply with regulatory control measures in LAMC (see RCM NOI- 1 through RCM NOI-8 above). As such, there is no potential for significant effects related to this Mitigation Measure to occur.
	<ul> <li>Such as blasting, determine the potential violation impacts to the structural integrity of the adjacent buildings within 50 feet of pile driving locations.</li> <li>For projects that require pile driving or other construction techniques that result in excessive vibration, such as blasting, determine the threshold levels of vibration and cracking that could damage adjacent historic or other structure, and design means and construction methods to not exceed the thresholds.</li> <li>For projects where pile driving would be necessary for construction due to geological conditions, utilize quiet pile driving techniques such as predrilling the piles to the maximum feasible depth, where feasible. Predrilling pile holes will reduce the number of blows required to completely seat the pile and will concentrate the pile driving activity closer to the ground where pile driving noise can be shielded more effectively by a noise barrier/curtain.</li> <li>For projects where pile driving would be necessary for construction due to geological conditions, utilize quiet pile driving activity closer to the ground where pile driving noise can be shielded more effectively by a noise barrier/curtain.</li> </ul>	
Population and Housing Displacement of Housing, Requiring Replacement Housing Elsewhere	Project-Level Implementation Measures         MM-PHE-2(b). Consistent with the provisions of Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures capable of avoiding or reducing the significant effects related to displacement that are within the jurisdiction and responsibility of Lead Agencies. Where the Lead Agency has identified that a project has the potential for significant effects, the Lead Agency can and should consider mitigation measures to minimize the displacement of existing housing and people and to ensure compliance with local jurisdiction's housing elements of their general plans, as applicable and feasible. Such measures may include the following, or other comparable measures identified by the Lead Agency:	This Mitigation Measure is not relevant to the Project. The Project would consist of the development of new housing and commercial land uses on a site that is currently vacant and improved with a Metro Station. No displacement of existing housing would occur with the development of the Project, and therefore, none of the suggested measures are applicable. As such, there is no potential for significant effects related to this Mitigation Measure to occur.
	<ul> <li>Evaluate alternate route alignments and transportation facilities that minimize the displacement of homes and businesses. Use an iterative design and impact analysis where impacts to homes or businesses are involved to minimize the potential of impacts on housing and displacement of people.</li> <li>Prioritize the use existing ROWs, wherever feasible.</li> <li>Develop a construction schedule that minimizes potential neighborhood deterioration from protracted</li> </ul>	

Торіс	Measure	Applicability to the Project
Public Services Adverse Impacts Associated with New or Physically Altered Governmental Facilities for Public Protective Fire and Emergency Services	<ul> <li>Project-Level Mitigation Measure</li> <li>MM-PS-1(b): Consistent with the provisions of Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures capable of avoiding or reducing the significant effects from the need for new or physically altered governmental facilities in order to maintain acceptable response times for fire protection and emergency response services that are within the jurisdiction and responsibility of fire departments, law enforcement agencies, and local jurisdictions. Where the Lead Agency has identified that a project has the potential for significant effects, the Lead Agency can and should consider mitigation measures consistent with the Community Facilities Act of 1982, the goals and policies established within the applicable adopted county and city general plans, to provide sufficient structures and buildings to accommodate fire and emergency response, as applicable and feasible. Such measures may include the following, or other comparable measures identified by the Lead Agency, taking into account project and site-specific considerations as applicable and feasible:</li> <li>Where the project has the potential to generate the need for expanded emergency response services which exceed the capacity of existing facilities, provide for the construction of new facilities directly as an element of the project or through dedicated fair share contributions toward infrastructure improvements.</li> <li>During project-level review of government facilities projects, require implementation of Mitigation Measures MM-AES-1(b), MM-AES-3(b), MM-AES-4(b), MM-AF-1(b), MM-AF-2(b), MM-BIO-1(b), MM-GEO-1(b), MM-GEO-1(b), MM-GEO-1(b), MM-GEO-1(b), MM-UL-3(b), MM-CUL-3(b), MM-CUL-3(b), MM-GEO-1(b), MM-GEO-1(b), MM-GEO-1(b), MM-UL-3(b), MM-CUL-3(b), MM-GEO-1(b), MM-GEO-1</li></ul>	<b>The Project substantially conforms to this Mitigation Measure.</b> As discussed in Section VI, Sustainable Communities Environmental Analysis, the Project would be served primarily by Fire Station No. 2, located at 1962 E. Cesar Chavez Avenue, approximately 0.5 mile north from the Project Site. <sup>3</sup> Fire Station No. 2 includes an assessment light force, engine, and paramedic rescue ambulance. <sup>4</sup> Fire Station No. 4, located at 450 E. Temple Street, approximately 1.7 miles west from the Project Site, would also serve the Project. Fire Station No. 4 includes an assessment engine, paramedic rescue ambulance, EMS battalion captain, and BLS rescue ambulance. <sup>5</sup> Furthermore, based on response metrics from January to July 2019, Fire Station No. 2 had an average response time 5 minutes and 9 seconds for non-EMS calls of, and 5 minutes and 9 seconds for EMS calls. Thus, the existing fire response distance from Fire Station No. 2 to the Project Site and average response time to the Project Site would be adequate. <sup>6</sup> Thus, the existing fire response distance from Fire Station No. 2 to the Project Site and average response time to the Project Site would continue to be provided from local roadways (i.e., E. 1 <sup>st</sup> Street and S. Soto Street). All improvements proposed would be in compliance with the Fire Code, including any additional access requirements of LAFD. Additionally, emergency access to the Project Site would be maintained at all times during both Project construction and operation. Therefore, the Project substantially conforms to this Mitigation Measure because existing facilities are capable of providing acceptable response times for fire protection and emergency response services.
Public Services	Project-Level Mitigation Measure	The Project substantially conforms to this Mitigation Measure. As discussed in
Adverse Impacts Associated with New or Physically Altered Governmental Facilities for Public Protective Security Services	<b>MM-PS-2(b):</b> Consistent with the provisions of Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures capable of avoiding or reducing the significant effects from the need for new or physically altered governmental facilities in order to maintain acceptable service ratios for police protection services that are within the jurisdiction and responsibility of law enforcement agencies and local jurisdictions. Where the Lead Agency has identified that a project has the potential for significant effects, the Lead Agency can and should consider mitigation measures consistent with the Community Facilities Act of 1982, the goals and policies established within the applicable adopted county and city general plans and the standards established in the safety elements of county and city general plans to maintain police response performance objectives, as applicable and feasible. Such measures may include the following, or other comparable measures identified by the Lead Agency, taking in to account project	Section VI, Sustainable Communities Environmental Analysis, the Project Site is currently served by the City of Los Angeles Police Department's (LAPD) Hollenbeck Community Police Station, which is located at 2111 E. 1 <sup>st</sup> Street, approximately 0.3 mile west from the Project Site. As discussed in Section VI, Sustainable Communities Environmental Analysis, in it is anticipated that any increase in demands upon police protection services would be relatively low, and not necessitate the construction of a new police station, the construction of which may cause significant environmental impacts. The Project substantially conforms to this Mitigation Measure because existing facilities are capable of providing acceptable response times for police protection. As such, there is no potential for significant effects related to this Mitigation Measure to occur.

<sup>&</sup>lt;sup>3</sup> City of Los Angeles Department of City Planning, Fire and Police Stations Map, May 2015, website: http://planning.lacity.org/mapgallery/Image/Citywide/LAPD\_LAFD.pdf, accessed: August 2019.

<sup>&</sup>lt;sup>4</sup> *City of Los Angeles Fire Department, Fire Station Directory, March 2014.* 

<sup>5</sup> Ibid.

<sup>&</sup>lt;sup>6</sup> City of Los Angeles Fire Department, Fire Stat LA, website: http://www.lafd.org/fsla/stations-map, accessed August 2019.

Торіс	Measure	Applicability to the Project
	and site-specific considerations as applicable and feasible, including:	
	<ul> <li>Coordinate with public security agencies to ensure that there are adequate governmental facilities to maintain acceptable service ratios, response times, or other performance objectives for public protective security services and that any required additional construction of buildings is incorporated into the project description.</li> </ul>	
	<ul> <li>Where current levels of services at the project site are found to be inadequate, provide fair share contributions towards infrastructure improvements and/or personnel.</li> </ul>	
	<ul> <li>During project-level review of government facilities projects, require implementation of Mitigation Measures MM-AES-1(b), MM-AES-3(b), MM-AES-4(b), MM-AF-1(b), MM-AF-2(b), MM-BIO-1(b), MM-BIO-2(b), MM-BIO-3(b), MM-CUL-1(b), MM-CUL-2(b), MM-CUL-3(b), MM-CUL-4(b), MM-GEO-1(b), MM-GEO-1(b), MM-HYD-1(b), MM-USS-3(b), MM-USS-4(b), and MM-USS-6(b) to avoid or reduce significant environmental impacts associated with the construction or expansion of such facilities, through the imposition of conditions required to be followed to avoid or reduce impacts associated with air quality, noise, traffic, biological resources, greenhouse gas emissions, hydrology and water quality, and others that apply to specific construction or expansion of new or expanded public service facilities.</li> </ul>	
Public Services	Project-Level Mitigation Measure	The Project substantially conforms to this Mitigation Measure. As discussed in
Adverse Impacts Associated with New or Physically Altered Governmental Facilities for School Services	<ul> <li>MM-PS-3(b): Consistent with the provisions of Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures capable of avoiding or reducing the significant effects from the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives that are within the jurisdiction and responsibility of school districts and local jurisdictions. Where the Lead Agency has identified that a project has the potential for significant effects, the Lead Agency can and should consider mitigation measures consistent with Community Facilities Act of 1982, the California Education Code, and the goals and policies established within the applicable adopted county and city general plans to ensure that the appropriate school district fees are paid in accordance with state law, as applicable and feasible. Such measures may include the following, or other comparable measures identified by the Lead Agency, taking in to account project and site-specific considerations as applicable and feasible:</li> <li>Where construction or expansion of school facilities is required to meet public school service ratios, require school district fees, as applicable.</li> </ul>	Section VI, Sustainable Communities Environmental Analysis, the Project would generate approximately 26 students. However, to reduce any potential population growth impacts on public schools, the governing board of any school district is authorized to levy a fee, charge, dedication, or other requirement against any construction within the boundaries of the district for the purpose of funding the construction or reconstruction of facilities (pursuant to California Education Code Section 17620(a)(1)). The maximum fees authorized under SB 50 apply to zone changes, general plan amendments, zoning permits, and subdivisions. SB 50 is deemed to fully address school facilities impacts, notwithstanding any contrary provisions in CEQA or other State or local law. The Project would be required to pay the appropriate fees, based on the square footage, to LAUSD. As such, the Project already substantially conforms with this Mitigation Measure.
	<ul> <li>During project-level review of government facilities projects, require implementation of Mitigation Measures MM-AES-1(b), MM-AES-3(b), MM-AES-4(b), MM-AF-1(b), MM-AF-2(b), MM-BIO-1(b), MM- BIO-2(b), MM-BIO-3(b), MM-CUL-1(b), MM-CUL-2(b), MM-CUL-3(b), MM-CUL-4(b), MM-GEO-1(b), MM-GEO-1(b), MM-HYD-1(b), MM-USS-3(b), MM-USS-4(b), and MM-USS-6(b) to avoid or reduce significant environmental impacts associated with the construction or expansion of such facilities, through the imposition of conditions required to be followed to avoid or reduce impacts associated with air quality, noise, traffic, biological resources, greenhouse gas emissions, hydrology and water quality, and others that apply to specific construction or expansion of new or expanded public service facilities.</li> </ul>	
<u>Recreation</u> Increased Use or Physical Deterioration of Recreational Facilities	Project-Level Mitigation Measure <b>MM-REC-1(b):</b> Consistent with the provisions of Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures capable of avoiding or reducing the significant effects on the integrity of recreation facilities, particularly neighborhood parks in the vicinity of HQTAs and other applicable development projects, that are within the jurisdiction and responsibility of other public agencies and/or	The Project substantially conforms to this Mitigation Measure. As discussed in Section VI, Sustainable Communities Environmental Analysis, monies collected as part of the Dwelling Unit Construction Tax is placed in a "Park and Recreational Sites and Facilities Fund" and used exclusively for the acquisition and development of park and recreational sites and facilities as set forth in

Торіс	Measure	Applicability to the Project
	Lead Agencies. Where the Lead Agency has identified that a project has the potential for significant effects, the Lead Agency can and should consider mitigation measures capable of avoiding or reducing significant impacts on the use of existing neighborhood and regional parks or other recreational facilities to ensure compliance with county and city general plans and the Quimby Act, as applicable and feasible. Such measures may include the following, or other comparable measures identified by the Lead Agency:	LAMC Section 21.10.3(d). Additionally, the Project would be required to pay Park Fees to the LADRP per LAMC Section 19.17. In addition, the Project would include 8,171 square feet of open space including: a central courtyard, community terrace, roof terrace, community room, exercise room, and private balconies.
	<ul> <li>Prior to the issuance of permits, where projects require the construction or expansion of recreational facilities or the payment of equivalent Quimby fees, consider increasing the accessibility to natural areas and lands for outdoor recreation from the Project area, in coordination with local and regional open space planning and/or responsible management agencies.</li> </ul>	
	<ul> <li>Prior to the issuance of permits, where projects require the construction or expansion of recreational facilities or the payment of equivalent Quimby fees, encourage patterns of urban development and land use which reduce costs on infrastructure and make better use of existing facilities, using strategies such as:</li> </ul>	
	<ul> <li>Increasing the accessibility to natural areas for outdoor recreation.</li> </ul>	
	<ul> <li>Promoting infill development and redevelopment to revitalize existing communities.</li> </ul>	
	<ul> <li>Utilizing "green" development techniques.</li> </ul>	
	<ul> <li>Promoting water-efficient land use and development.</li> </ul>	
	<ul> <li>Encouraging multiple uses.</li> <li>Including trail output and trail operators in Concern Diag accessible storadoute</li> </ul>	
	<ul> <li>Including trail systems and trail segments in General Plan recreation standards.</li> </ul>	
	<ul> <li>Prior to the issuance of permits, where construction and operation of projects would require the acquisition or development of protected open space or recreation lands, demonstrate that existing neighborhood parks can be expanded or new neighborhood parks developed such that there is no net decrease in acres of neighborhood park area available per capita in the HQTA.</li> </ul>	
	<ul> <li>Where construction or expansion of recreational facilities is included in the project or required to meet public park service ratios, require implementation of Mitigation Measures MM-AES-1(b), MM-AES-3(b), MM-AES-4(b), MM-AF-1(b), MM-AF-2(b), MM-BIO-1(b), MM-BIO-2(b), MM-BIO-3(b), MM-CUL-1(b), MM-CUL-2(b), MM-CUL-3(b), MM-CUL-4(b), MM-GEO-1(b), MM-GEO-1(b), MM-HYD-1(b), MM-USS-3(b), MM-USS-4(b), and MM-USS-6(b) to avoid or reduce significant environmental impacts associated with the construction or expansion of such facilities, through the imposition of conditions required to be followed to avoid or reduce impacts associated with air quality, noise, traffic, biological resources, greenhouse gas emissions, hydrology and water quality, and others that apply to specific construction or expansion of new or expanded public service facilities.</li> </ul>	
Transportation/Traffic	Project-Level Mitigation Measure	The Project substantially conforms to this Mitigation Measure. Based on the
Conflict with Measures of Effectiveness for Performance of the Circulation System	<b>MM-TRA-1(b):</b> Consistent with the provisions of Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures capable of avoiding or reducing the potential for conflicts with the established measures of effectiveness for the performance of the circulation system that are within the jurisdiction and responsibility of Lead Agencies. This measure need only be considered where it is found by the Lead Agency to be appropriate and consistent with local transportation priorities. Where the Lead Agency has identified that a project has the potential for significant effects, the Lead Agency can and should consider mitigation measures to ensure compliance with the adopted Congestion Management Plan, and other adopted local plans and policies, as applicable and feasible. Compliance can be achieved through adopting transportation mitigation measures as sat forth below, or through other comparable	Transportation Impact Study prepared for the Project, construction and operation of the Project would have a less-than-significant impact on the street system in the vicinity of the Project. The Project Applicant would be required to submit formal construction staging and traffic control plans for review and approval by LADOT prior to the issuance of any construction permits. Moreover, the Project would implement the following regulatory compliance measure for temporary construction impacts: <b>RCM TRAF-1</b> The Applicant shall prepare a detailed Work Site Traffic Control Plan that shall include but not be limited to the following elements as

Торіс	Measure	Applicability to the Project
	measures identified by the Lead Agency:	appropriate:
	<ul> <li>Institute teleconferencing, telecommute and/or flexible work hour programs to reduce unnecessary employee transportation.</li> <li>Croate a ride sharing program by designating a contain percentage of parking spaces for ride sharing</li> </ul>	<ul> <li>Advance, bilingual notification of adjacent property owners and occupants of upcoming construction activities, including estimated duration of construction and daily hours of construction;</li> </ul>
	<ul> <li>Create a indestinanting program by designating a certain percentage of parking spaces for inde sharing vehicles, designating adequate passenger loading and unloading for ride sharing vehicles, and providing a web site or message board for coordinating rides.</li> </ul>	<ul> <li>Prohibition of construction worker or equipment parking on adjacent streets;</li> </ul>
	Provide a vanpool for employees.	• Temporary pedestrian, bicycle, and vehicular traffic controls during all
	• Fund capital improvement projects to accommodate future traffic demand in the area.	construction activities adjacent to ensure traffic safety on public rights of way. These controls shall include, but not be limited to flag people trained
	<ul> <li>Provide a Transportation Demand Management (TDM) plan containing strategies to reduce on-site parking demand and single occupancy vehicle travel. The TDM shall include strategies to increase bicycle, pedestrian transit and caroools/vannool use including:</li> </ul>	<ul> <li>in pedestrian and bicycle safety at the Project Site's driveways.</li> <li>Temporary traffic control during all construction activities adjacent to public</li> </ul>
	Inclusion of additional bicycle parking shower, and locker facilities that exceed the requirement	rights-of-way to improve traffic flow on public roadways (e.g., flag men);
	<ul> <li>Construction of bike lanes per the prevailing Bicycle Master Plan (or other similar document)</li> </ul>	<ul> <li>Scheduling of construction activities to reduce the effect on traffic flow on surrounding arterial streets;</li> </ul>
	<ul> <li>Signage and striping onsite to encourage bike safety</li> </ul>	Potential sequencing of construction activity for the Project to reduce the
	<ul> <li>Installation of pedestrian safety elements (such as cross walk striping, curb ramps, countdown signals, bulb outs atc.) to produce conversion crossing at arterials.</li> </ul>	amount of construction-related traffic on arterial streets;
	Installation of amonities such as lighting, street trees, trach and any applicable streetscape plan	<ul> <li>Containment of construction activity within the Project Site boundaries;</li> </ul>
	<ul> <li>Direct transit sales or subsidized transit passes</li> </ul>	<ul> <li>Safety precautions for pedestrians through such measures as alternate routing and protection barriers shall be implemented;</li> </ul>
	Guaranteed ride home program	Scheduling of construction-related deliveries, haul trips, etc., so as to occur
	Pre-tax commuter benefits (checks)	outside the commuter peak hours;
	On-site car-sharing program (such as City Car Share, Zip Car, etc.)	<ul> <li>Applicant shall plan construction and construction staging as to maintain pedestrian access on adjacent sidewalks throughout all construction</li> </ul>
	On-site carpooling program	phases. This requires the applicant to maintain adequate and safe
	Distribution of information concerning alternative transportation options	pedestrian protection, including physical separation (including utilization of
	Parking spaces sold/leased separately	traffic and overhead protection, due to sidewalk closure or blockage, at all
	<ul> <li>Parking management strategies; including attendant/valet parking and shared parking spaces.</li> </ul>	times;
	<ul> <li>Promote ride sharing programs e.g., by designating a certain percentage of parking spaces for high- occupancy vehicles, providing larger parking spaces to accommodate vans used for ride-sharing, and designating adequate passenger loading and unloading and waiting areas.</li> </ul>	<ul> <li>Temporary pedestrian facilities should be adjacent to the project site and provide safe, accessible routes that replicate as nearly as practical the most desirable characteristics of the existing facility;</li> </ul>
	<ul> <li>Encourage bicycling to transit facilities by providing additional bicycle parking, locker facilities, and bike lane access to transit facilities when feasible.</li> </ul>	<ul> <li>Covered walkways shall be provided where pedestrians are exposed to potential injury from falling objects;</li> </ul>
	<ul> <li>Encourage the use of public transit systems by enhancing safety and cleanliness on vehicles and in and around stations, providing shuttle service to public transit, offering public transit incentives and providing public education and publicity about public transportation services.</li> </ul>	<ul> <li>Applicant shall keep sidewalk open during construction until only when it is absolutely required to close or block sidewalk for construction staging. Sidewalk shall be reopened as soon as reasonably feasible taking</li> </ul>
	<ul> <li>Encourage bicycling and walking by incorporating bicycle lanes into street systems in regional transportation plans, new subdivisions, and large developments, creating bicycle lanes and walking paths directed to the location of schools and other logical points of destination and provide adequate bicycle parking, and encouraging commercial projects to include facilities on-site to encourage employees to bicycle or walk to work.</li> </ul>	construction and construction

Торіс	Measure	Applicability to the Project
	• Build or fund a major transit stop within or near transit development upon consultation with applicable CTCs.	
	<ul> <li>Work with the school districts to improve pedestrian and bike access to schools and to restore or expand school bus service using lower-emitting vehicles.</li> </ul>	
	<ul> <li>Provide information on alternative transportation options for consumers, residents, tenants and employees to reduce transportation-related emissions.</li> </ul>	
	<ul> <li>Educate consumers, residents, tenants and the public about options for reducing motor vehicle-related greenhouse gas emissions. Include information on trip reduction; trip linking; vehicle performance and efficiency (e.g., keeping tires inflated); and low or zero-emission vehicles.</li> </ul>	
	Purchase, or create incentives for purchasing, low or zero-emission vehicles.	
	Create local "light vehicle" networks, such as neighborhood electric vehicle systems.	
	• Enforce and follow limits idling time for commercial vehicles, including delivery and construction vehicles.	
	• Provide the necessary facilities and infrastructure to encourage the use of low or zero-emission vehicles.	
	<ul> <li>Reduce VMT-related emissions by encouraging the use of public transit through adoption of new development standards that would require improvements to the transit system and infrastructure, increase safety and accessibility, and provide other incentives.</li> </ul>	
	Project Selection:	
	<ul> <li>Give priority to transportation projects that would contribute to a reduction in vehicle miles traveled per capita, while maintaining economic vitality and sustainability.</li> </ul>	
	• Separate sidewalks whenever possible, on both sides of all new street improvement projects, except where there are severe topographic or natural resource constraints.	
	Public Involvement:	
	<ul> <li>Carry out a comprehensive public involvement and input process that provides information about transportation issues, projects, and processes to community members and other stakeholders, especially to those traditionally underserved by transportation services.</li> </ul>	
	Transit and Multimodal Impact Fees:	
	<ul> <li>Assess transit and multimodal impact fees for new developments to fund public transportation infrastructure, bicycle infrastructure, pedestrian infrastructure and other multimodal accommodations.</li> </ul>	
	<ul> <li>Implement traffic and roadway management strategies to improve mobility and efficiency, and reduce associated emissions.</li> </ul>	
	System Monitoring:	
	<ul> <li>Monitor traffic and congestion to determine when and where new transportation facilities are needed in order to increase access and efficiency.</li> </ul>	
	Arterial Traffic Management:	
	<ul> <li>Modify arterial roadways to allow more efficient bus operation, including bus lanes and signal priority/preemption where necessary.</li> </ul>	
	Signal Synchronization:	
	• Expand signal timing programs where emissions reduction benefits can be demonstrated, including	

Торіс	Measure	Applicability to the Project
	maintenance of the synchronization system, and will coordinate with adjoining jurisdictions as needed to optimize transit operation while maintaining a free flow of traffic.	
	HOV Lanes:	
	• Encourage the construction of high-occupancy vehicle (HOV) lanes or similar mechanisms whenever necessary to relieve congestion and reduce emissions.	
	Delivery Schedules:	
	• Establish ordinances or land use permit conditions limiting the hours when deliveries can be made to off- peak hours in high traffic areas.	
	Implement and supporting trip reduction programs.	
	• Support bicycle use as a mode of transportation by enhancing infrastructure to accommodate bicycles and riders, and providing incentives.	
	• Establish standards for new development and redevelopment projects to support bicycle use, including amending the Development Code to include standards for safe pedestrian and bicyclist accommodations, and require new development and redevelopment projects to include bicycle facilities.	
	Bicycle and Pedestrian Trails:	
	<ul> <li>Establish a network of multi-use trails to facilitate safe and direct off-street bicycle and pedestrian travel, and will provide bike racks along these trails at secure, lighted locations.</li> </ul>	
	Bicycle Safety Program:	
	<ul> <li>Develop and implement a bicycle safety educational program to teach drivers and riders the laws, riding protocols, routes, safety tips, and emergency maneuvers.</li> </ul>	
	• Bicycle and Pedestrian Project Funding: Pursue and provide enhanced funding for bicycle and pedestrian facilities and access projects.	
	Bicycle Parking:	
	<ul> <li>Adopt bicycle parking standards that ensure bicycle parking sufficient to accommodate 5 to 10 percent of projected use at all public and commercial facilities, and at a rate of at least one per residential unit in multiple-family developments (suggestion: check language with League of American Bicyclists).</li> </ul>	
	<ul> <li>Adopt a comprehensive parking policy to discourage private vehicle use and encourage the use of alternative transportation by incorporating the following:</li> </ul>	
	<ul> <li>Reduce the available parking spaces for private vehicles while increasing parking spaces for shared vehicles, bicycles, and other alternative modes of transportation;</li> </ul>	
	<ul> <li>Eliminate or reduce minimum parking requirements for new buildings;</li> </ul>	
	<ul> <li>"Unbundle" parking (require that parking is paid for separately and is not included in the base rent for residential and commercial space);</li> </ul>	
	<ul> <li>Use parking pricing to discourage private vehicle use, especially at peak times;</li> </ul>	
	<ul> <li>Create parking benefit districts, which invest meter revenues in pedestrian infrastructure and other public amenities;</li> </ul>	
	<ul> <li>Establish performance pricing of street parking, so that it is expensive enough to promote frequent turnover and keep 15 percent of spaces empty at all times;</li> </ul>	
	<ul> <li>Encourage shared parking programs in mixed-use and transit-oriented development areas.</li> </ul>	

Торіс	Measure	Applicability to the Project
	• Establish policies and programs to reduce onsite parking demand and promote ride-sharing and public transit at large events, including:	
	<ul> <li>Promote the use of peripheral parking by increasing on-site parking rates and offering reduced rates for peripheral parking;</li> </ul>	
	<ul> <li>Encourage special event center operators to advertise and offer discounted transit passes with event tickets;</li> </ul>	
	<ul> <li>Encourage special event center operators to advertise and offer discount parking incentives to carpooling patrons, with four or more persons per vehicle for on-site parking;</li> </ul>	
	• Promote the use of bicycles by providing space for the operation of valet bicycle parking service.	
	Parking "Cash-out" Program:	
	<ul> <li>Require new office developments with more than 50 employees to offer a Parking "Cash-out" Program to discourage private vehicle use.</li> </ul>	
	Pedestrian and Bicycle Promotion:	
	<ul> <li>Work with local community groups and downtown business associations to organize and publicize walking tours and bicycle events, and to encourage pedestrian and bicycle modes of transportation.</li> </ul>	
	Fleet Replacement:	
	<ul> <li>Establish a replacement policy and schedule to replace fleet vehicles and equipment with the most fuel efficient vehicles practical, including gasoline hybrid and alternative fuel or electric models.</li> </ul>	
Transportation/Traffic	Project-Level Mitigation Measure	This Mitigation Measure is not relevant to the Project. The Congestion
Conflict with Applicable Congestion Management Program	<b>MM-TRA-2(b).</b> Consistent with the provisions of Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures capable of avoiding conflict with an applicable congestion management program that are within the jurisdictions of the lead agencies, including, but not limited to, VMT, VHD and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways. This measure need only be considered where it is found by the Lead Agency to be appropriate and consistent with local transportation priorities. Where the Lead Agency has identified that a project has the potential for significant effects, the Lead Agency can and should consider mitigation measures to ensure compliance with the adopted Congestion Management Plan, and other	<ul> <li>Management Program (CMP) was established statewide in 1990 to implement Proposition 111, tying appropriation of new gas tax revenues to congestion reduction efforts. CMP is managed at the countywide level and primarily uses an LOS performance metric, which is inconsistent with more recent state efforts to transition to VMT-based performance metrics. California Government Code Section 65088.3 allows counties to opt out of CMP requirements without penalty, if a majority of local jurisdictions representing a majority of a county's population formally adopt resolutions requesting to opt out of the program.</li> <li>On June 20, 2018, Los Angeles County Metropolitan Transportation Authority (Metro) initiated a process to gauge the interest of local jurisdictions in opting out of State CMP requirements. On July 30, 2019, the Los Angeles City Council passed a resolution to opt out of the CMP program, and on August 28, 2019,</li> </ul>
	adopted local plans and policies, as applicable and feasible. Compliance can be achieved through adopting transportation mitigation measures such as those set forth below, or through other relevant and feasible comparable measures identified by the Lead Agency. Not all measures and/or options within each measure may apply to all jurisdictions:	
	<ul> <li>Encourage a comprehensive parking policy that prioritizes system management, increase rideshare, and telecommute opportunities, including investment in non-motorized transportation and discouragement against private vehicle use, and encouragement to maximize the use of alternative transportation:</li> </ul>	Metro announced that the thresholds had been reached and the County of Los Angeles had opted to be exempt from CMP. As such, the provisions of CMP no longer apply to any of the 89 local jurisdictions in Los Angeles County. Accordingly, CMP analysis is no longer included in City of Los Angeles
	<ul> <li>Auvocate for a regional, market-based system to price or charge for auto trips during peak hours.</li> <li>Ensure that now developments incorrecte bath local and ensure that here is a statistic the second system to price or charge for auto trips during peak hours.</li> </ul>	environmental documents. Therefore, this Mitigation Measure is not required.
	<ul> <li>Ensure that new developments incorporate both local and regional transit measures into the project design that promote the use of alternative modes of transportation.</li> </ul>	Nevertheless, to reduce any potential impacts related to construction, RCM- TRAF-1, described above would be incorporated. There is no potential for
	<ul> <li>Coordinate controlled intersections so that traffic passes more efficiently through congested areas.</li> <li>Where traffic signals or streetlights are installed, require the use of Light Emitting Diode (LED) technology or similar technology.</li> </ul>	significant effects related to this Mitigation Measure.

Торіс	Measure	Applicability to the Project
	<ul> <li>Encourage the use of car-sharing programs. Accommodations for such programs include providing parking spaces for the car-share vehicles at convenient locations accessible by public transportation.</li> </ul>	
	<ul> <li>Reduce VHDs, especially daily heavy-duty truck vehicle hours of delay, through goods movement capacity enhancements, system management, increasing rideshare and work-at-home opportunities to reduce demand on the transportation system, investments in non-motorized transportation, maximizing the benefits of the land use-transportation connection and key transportation investments targeted to reduce heavy-duty truck delay.</li> </ul>	
	<ul> <li>Determine traffic management strategies to reduce, to the maximum extent feasible, traffic congestion and the effects of parking demand by construction workers during construction of this project and other nearby projects that could be simultaneously under construction. Develop a construction management plan that include the following items and requirements, if determined feasible and applicable by the Lead Agency:</li> </ul>	
	<ul> <li>A set of comprehensive traffic control measures, including scheduling of major truck trips and deliveries to avoid peak traffic hours, detour signs if required, lane closure procedures, signs, cones for drivers, and designated construction access routes.</li> </ul>	
	<ul> <li>Notification procedures for adjacent property owners and public safety personnel regarding when major deliveries, detours, and lane closures will occur.</li> </ul>	
	<ul> <li>Location of construction staging areas for materials, equipment, and vehicles at an approved location.</li> </ul>	
	<ul> <li>A process for responding to, and tracking, complaints pertaining to construction activity, including identification of an onsite complaint manager. The manager shall determine the cause of the complaints and shall take prompt action to correct the problem. The Lead Agency shall be informed who the Manager is prior to the issuance of the first permit.</li> </ul>	
	<ul> <li>Provision for accommodation of pedestrian flow.</li> </ul>	
	<ul> <li>As necessary, provision for parking management and spaces for all construction workers to ensure that construction workers do not park in on street spaces.</li> </ul>	
	<ul> <li>Any damage to the street caused by heavy equipment, or as a result of this construction, shall be repaired, at the project sponsor's expense., within one week of the occurrence of the damage (or excessive wear), unless further damage/excessive wear may continue; in such case, r Repair shall occur prior to issuance of a final inspection of the building permit. All damage that is a threat to public health or safety shall be repaired immediately. The street shall be restored to its condition prior to the new construction as established by the Lead Agency (or other appropriate government agency) and/or photo documentation, at the sponsor's expense, before the issuance of a Certificate of Occupancy.</li> </ul>	
	• Any heavy equipment brought to the construction site shall be transported by truck, where feasible.	
	<ul> <li>No materials or equipment shall be stored on the traveled roadway at any time.</li> </ul>	
	<ul> <li>Prior to construction, a portable toilet facility and a debris box shall be installed on the site, and properly maintained through project completion.</li> </ul>	
	<ul> <li>All equipment shall be equipped with mufflers.</li> </ul>	
	<ul> <li>Prior to the end of each work-day during construction, the contractor or contractors shall pick up and properly dispose of all litter resulting from or related to the project, whether located on the property,</li> </ul>	

Торіс	Measure	Applicability to the Project
	within the public rights-of-way, or properties of adjacent or nearby neighbors.	
	<ul> <li>Promote "least polluting" ways to connect people and goods to their destinations.</li> </ul>	
	<ul> <li>Create an interconnected transportation system that allows a shift in travel from private passenger vehicles to alternative modes, including public transit, ride sharing, car sharing, bicycling and walking, by incorporating the following, if determined feasible and applicable by the Lead Agency:</li> </ul>	
	<ul> <li>Ensure transportation centers are multi-modal to allow transportation modes to intersect.</li> </ul>	
	<ul> <li>Provide adequate and affordable public transportation choices, including expanded bus routes and service, as well as other transit choices such as shuttles, light rail, and rail.</li> </ul>	
	<ul> <li>To the extent feasible, extend service and hours of operation to underserved arterials and population centers or destinations such as colleges.</li> </ul>	
	<ul> <li>Focus transit resources on high-volume corridors and high-boarding destinations such as colleges, employment centers and regional destinations.</li> </ul>	
	<ul> <li>Coordinate schedules and routes across service lines with neighboring transit authorities.</li> </ul>	
	<ul> <li>Support programs to provide "station cars" for short trips to and from transit nodes (e.g., neighborhood electric vehicles).</li> </ul>	
	<ul> <li>Study the feasibility of providing free transit to areas with residential densities of 15 dwelling units per acre or more, including options such as removing service from less dense, underutilized areas to do so.</li> </ul>	
	<ul> <li>Employ transit-preferential measures, such as signal priority and bypass lanes. Where compatible with adjacent land use designations, right-of-way acquisition or parking removal may occur to accommodate transit-preferential measures or improve access to transit. The use of access management shall be considered where needed to reduce conflicts between transit vehicles and other vehicles.</li> </ul>	
	<ul> <li>Provide safe and convenient access for pedestrians and bicyclists to, across, and along major transit priority streets.</li> </ul>	
	<ul> <li>Use park-and-ride facilities to access transit stations only at ends of regional transit ways or where adequate feeder bus service is not feasible.</li> </ul>	
	<ul> <li>Upgrade and maintain transit system infrastructure to enhance public use, if determined feasible and applicable by the Lead Agency, including:</li> </ul>	
	<ul> <li>Ensure transit stops and bus lanes are safe, convenient, clean and efficient.</li> </ul>	
	<ul> <li>Ensure transit stops have clearly marked street-level designation, and are accessible.</li> </ul>	
	<ul> <li>Ensure transit stops are safe, sheltered, benches are clean, and lighting is adequate.</li> </ul>	
	<ul> <li>Place transit stations along transit corridors within mixed-use or transit-oriented development areas at intervals of three to four blocks, or no less than one-half mile.</li> </ul>	
	• Enhance customer service and system ease-of-use, if determined feasible and applicable by the Lead Agency, including:	
	<ul> <li>Develop a Regional Pass system to reduce the number of different passes and tickets required of system users.</li> </ul>	
	o Implement "Smart Bus" technology, using GPS and electronic displays at transit stops to provide	

Торіс	Measure	Applicability to the Project
	customers with "real-time" arrival and departure time information (and to allow the system operator to respond more quickly and effectively to disruptions in service).	
	<ul> <li>Investigate the feasibility of an on-line trip-planning program.</li> </ul>	
	• Prioritize transportation funding to support a shift from private passenger vehicles to transit and other modes of transportation, if determined feasible and applicable by the Lead Agency, including:	
	<ul> <li>Give funding preference to improvements in public transit over other new infrastructure for private automobile traffic.</li> </ul>	
	<ul> <li>Before funding transportation improvements that increase roadway capacity and VMT, evaluate the feasibility and effectiveness of funding projects that support alternative modes of transportation and reduce VMT, including transit, and bicycle and pedestrian access.</li> </ul>	
	Promote ride sharing programs, if determined feasible and applicable by the Lead Agency, including:	
	<ul> <li>Designate a certain percentage of parking spaces for ride-sharing vehicles.</li> </ul>	
	<ul> <li>Designate adequate passenger loading, unloading, and waiting areas for ride-sharing vehicles.</li> </ul>	
	<ul> <li>Provide a web site or message board for coordinating shared rides.</li> </ul>	
	<ul> <li>Encourage private, for-profit community car-sharing, including parking spaces for car share vehicles at convenient locations accessible by public transit.</li> </ul>	
	• Hire or designate a rideshare coordinator to develop and implement ridesharing programs.	
	• Support voluntary, employer-based trip reduction programs, if determined feasible and applicable by the Lead Agency, including:	
	<ul> <li>Provide assistance to regional and local ridesharing organizations.</li> </ul>	
	<ul> <li>Advocate for legislation to maintain and expand incentives for employer ridesharing programs.</li> </ul>	
	<ul> <li>Require the development of Transportation Management Associations for large employers and commercial/ industrial complexes.</li> </ul>	
	<ul> <li>Provide public recognition of effective programs through awards, top ten lists, and other mechanisms.</li> </ul>	
	• Implement a "guaranteed ride home" program for those who commute by public transit, ride-sharing, or other modes of transportation, and encourage employers to subscribe to or support the program.	
	Encourage and utilize shuttles to serve neighborhoods, employment centers and major destinations.	
	• Create a free or low-cost local area shuttle system that includes a fixed route to popular tourist destinations or shopping and business centers.	
	Work with existing shuttle service providers to coordinate their services.	
	Facilitate employment opportunities that minimize the need for private vehicle trips, including:	
	<ul> <li>Amend zoning ordinances and the Development Code to include live/work sites and satellite work centers in appropriate locations.</li> </ul>	
	<ul> <li>Encourage telecommuting options with new and existing employers, through project review and incentives, as appropriate.</li> </ul>	
	Enforce state idling laws for commercial vehicles, including delivery and construction vehicles.	
	Organize events and workshops to promote GHG-reducing activities.	

Торіс	Measure	Applicability to the Project
	Implement a Parking Management Program to discourage private vehicle use, including:	
	<ul> <li>Encouraging carpools and vanpools with preferential parking and a reduced parking fee.</li> </ul>	
	<ul> <li>Institute a parking cash-out program.</li> </ul>	
	<ul> <li>Renegotiate employee contracts, where possible, to eliminate parking subsidies.</li> </ul>	
	<ul> <li>Install on-street parking meters with fee structures designed to discourage private vehicle use.</li> </ul>	
	<ul> <li>Establish a parking fee for all single-occupant vehicles.</li> </ul>	
	Work with school districts to improve pedestrian and bicycle to schools and restore school bus service	
	<ul> <li>Encourage the use of bicycles to transit facilities by providing bicycle parking lockers facilities and bike land access to transit facilities.</li> </ul>	
	<ul> <li>Monitor traffic congestion to determine where and when new transportation facilities are needed to increase access and efficiency.</li> </ul>	
	<ul> <li>Develop and implement a bicycle and pedestrian safety educational program to teach drivers and riders the laws, riding protocols, safety tips, and emergency maneuvers.</li> </ul>	
	Synchronize traffic signals to reduce congestion and air quality.	
	<ul> <li>Work with community groups and business associations to organize and publicize walking tours and bicycle evens.</li> </ul>	
	Support legislative efforts to increase funding for local street repair.	
Transportation/Traffic Inadequate Emergency Access <u>Hazards and</u> <u>Hazardous Materials</u> Impair or Interfere with Emergency Response or Evacuation Plan	Project-Level Mitigation Measure <b>MM-TRA-5(b):</b> Consistent with the provisions of Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures capable of avoiding or reducing impacts to emergency access that are in the jurisdiction and responsibility of fire departments, local enforcement agencies, and/or Lead Agencies. Where the Lead Agency has identified that a project has the potential for significant effects, the Lead Agency can and should consider improving emergency access and ensuring compliance with the provisions of the county and city general plan, Emergency Evacuation Plan, and other regional and local plans establishing access during emergencies, as applicable and feasible. Compliance can be achieved through adopting transportation mitigation measures as set forth below, or through other comparable measures identified by the Lead Agency:	The Project substantially conforms to this Mitigation Measure. Emergency access to the Project site would be provided by the existing street system, and the Project is designed and would be constructed in accordance with LAMC requirements to ensure proper emergency access. Moreover, the drivers of emergency vehicles normally have a variety of options for avoiding traffic, such as using sirens to clear a path of travel or driving in the lane of opposing traffic. Nevertheless, to reduce any potential impacts related to construction, mandatory compliance with the following regulatory compliance measure, RCM-TRAF-1, described above would be incorporated.
	<ul> <li>Prior to construction, project implementation agencies can and should ensure that all necessary local and state road and railroad encroachment permits are obtained. The project implementation agency can and should also comply with all applicable conditions of approval. As deemed necessary by the governing jurisdiction, the road encroachment permits may require the contractor to prepare a traffic control plan in accordance with professional engineering standards prior to construction. Traffic control plans can and should include the following requirements:         <ul> <li>Identification of all roadway locations where special construction techniques (e.g., directional drilling or night construction) would be used to minimize impacts to traffic flow.</li> <li>Development of circulation and detour plans to minimize impacts to local street circulation. This may include the use of signing and flagging to guide vehicles through and/or around the construction</li> </ul> </li> </ul>	
	<ul> <li>Scheduling of truck trips outside of peak morning and evening commute hours.</li> </ul>	

Торіс	Measure	Applicability to the Project
	<ul> <li>Limiting of lane closures during peak hours to the extent possible.</li> <li>Usage of haul routes minimizing truck traffic on local roadways to the extent possible.</li> </ul>	
	<ul> <li>Osage of had routes minimizing track traine on local routiways to the extent possible.</li> <li>Inclusion of detours for bicycles and pedestrians in all areas potentially affected by project construction.</li> </ul>	
	<ul> <li>Installation of traffic control devices as specified in the California Department of Transportation Manual of Traffic Controls for Construction and Maintenance Work Zones.</li> </ul>	
	<ul> <li>Development and implementation of access plans for highly sensitive land uses such as police and fire stations, transit stations, hospitals, and schools. The access plans would be developed with the facility owner or administrator. To minimize disruption of emergency vehicle access, affected jurisdictions can and should be asked to identify detours for emergency vehicles, which will then be posted by the contractor. Notify in advance the facility owner or operator of the timing, location, and duration of construction activities and the locations of detours and lane closures.</li> </ul>	
	<ul> <li>Storage of construction materials only in designated areas.</li> </ul>	
	<ul> <li>Coordination with local transit agencies for temporary relocation of routes or bus stops in work zones, as necessary. Ensure the rapid repair of transportation infrastructure in the event of an emergency through cooperation among public agencies and by identifying critical infrastructure needs necessary for: a) emergency responders to enter the region, b) evacuation of affected facilities, and c) restoration of utilities.</li> </ul>	
	Enhance emergency preparedness awareness among public agencies and with the public at large.	
	<ul> <li>Provision for collaboration in planning, communication, and information sharing before, during, or after a regional emergency through the following:</li> </ul>	
	<ul> <li>Incorporate strategies and actions pertaining to response and prevention of security incidents and events as part of the on-going regional planning activities.</li> </ul>	
	<ul> <li>Provide a regional repository of GIS data for use by local agencies in emergency planning, and response, in a standardized format.</li> </ul>	
	<ul> <li>Enter into mutual aid agreements with other local jurisdictions, in coordination with the California OES, in the event that an event disrupts the jurisdiction's ability to function.</li> </ul>	
Utilities and Service	Project-Level Mitigation Measure	The Project substantially conforms to this Mitigation Measure. The largely
<u>Systems</u> Require New Water or Wastewater Treatment Facilities	<b>MM-USS-3(b):</b> Consistent with the provisions of Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures capable of avoiding or reducing the significant effects on utilities and service systems, particularly for construction of storm water drainage facilities including new transportation	impervious existing Project Site conditions and the increase in the amount of landscaping and other pervious surfaces, the Project would not result in a significant increase in site runoff, or any changes in the local drainage patterns.
	and land use projects that are within the responsibility of local jurisdictions including the Riverside, San Bernardino, Los Angeles, Ventura, and Orange Counties Flood Control District, and County of Imperial. Where the Lead Agency has identified that a project has the potential for significant effects, the Lead Agency can and should consider mitigation measures, as applicable and feasible. These mitigation measures are within the responsibility of the Lead Agencies and Regional Water Quality Control Boards of (Regions 4, 6, 8, and 9) pursuant to the provisions of the National Flood Insurance Act, stormwater permitting requirements for stormwater discharges for new constructions, the flood control act, and Urban Waste Management Plan.	Dewatering, treatment, and disposal of groundwater would be conducted in accordance with permitted requirements set forth by the Los Angeles Regional Water Quality Control Board (LARWQCB)'s Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties. This permit specifies groundwater discharge prohibitions, receiving water limitations, monitoring and reporting program requirements, and general compliance determination criteria for groundwater discharges.
	Such mitigation measures, or other comparable measures, capable of avoiding or reducing significant impacts on the use of existing storm water drainage facilities and can and should be adopted where Lead Agencies	In addition, the Project would be designed to comply with the City of Los Angeles's Low Impact Development (LID) design standard. Runoff from the

Торіс	Measure	Applicability to the Project
	identify significant impacts on new storm water drainage facilities.	Project site is and would continue to be collected on the site and directed towards existing storm drains in the vicinity. Therefore, the City has determined that the Project would not create or contribute runoff that would exceed the capacity of existing or planned stormwater drainage systems.
Utilities and Service Systems Require New or Expanded Entitlements for Water Supply	Project-Level Mitigation Measure MM-USS-4(b): Consistent with the provisions of Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures capable of avoiding or reducing the significant effects on water supplies from existing entitlements requiring new or expanded services in the vicinity of HQTAs that are in the jurisdiction and responsibility of public agencies and/or Lead Agencies. Where the Lead Agency has identified that a project has the potential for significant effects, the Lead Agency can and should consider mitigation measures to ensure compliance with EO B-29-15, provisions of the Porter –Cologne Water Quality Control Act, California Domestic Water Supply Permit requirements, and applicable County, City or other Local provisions. Such measures may include the following or other comparable measures identified by the Lead Agency:	The Project substantially conforms to this Mitigation Measure. The net increase of water demand from the Project would be within the projections of the City of Los Angeles's 2015 Urban Water Management Plan and no new or expanded entitlements for water supply would be required. As discussed in the Section II, Project Description, the proposed building would meet and/or exceed all City Building Code and Title 24 requirements, and the Project would emphasize water conservation through the use of energy star appliances and low flow plumbing fixtures.
	<ul> <li>Neutre exterior consumptive uses of water in public areas, and should promote reductions in private homes and businesses, by shifting to drought-tolerant native landscape plantings (xeriscaping), using weather-based irrigation systems, educating other public agencies about water use, and installing related water pricing incentives.</li> </ul>	
	<ul> <li>Promote the availability of drought-resistant landscaping options and provide information on where these can be purchased. Use of reclaimed water especially in median landscaping and hillside landscaping can and should be implemented where feasible.</li> </ul>	
	• Implement water conservation best practices such as low-flow toilets, water-efficient clothes washers, water system audits, and leak detection and repair.	
	• Ensure that projects requiring continual dewatering facilities implement monitoring systems and long- term administrative procedures to ensure proper water management that prevents degrading of surface water and minimizes, to the greatest extent possible, adverse impacts on groundwater for the life of the project. Comply with appropriate building codes and standard practices including the Uniform Building Code.	
	• Maximize, where practical and feasible, permeable surface area in existing urbanized areas to protect water quality, reduce flooding, allow for groundwater recharge, and preserve wildlife habitat. Minimized new impervious surfaces to the greatest extent possible, including the use of in-lieu fees and off-site mitigation.	
	• Avoid designs that require continual dewatering where feasible. Where feasible, do not site transportation facilities in groundwater recharge areas, to prevent conversion of those areas to impervious surface	

Торіс	Measure	Applicability to the Project
Utilities and Service Systems Landfill with Sufficient Capacity	Project-Level Mitigation Measure <b>MM-USS-6(b):</b> Consistent with the provisions of Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures capable of avoiding or reducing the significant effects to serve landfills with sufficient permitted capacity to accommodate solid waste disposal needs, in which 75 percent of the waste stream be recycled and waste reduction goal by 50 percent that are within the responsibility of public agencies and/or Lead Agencies. Where the Lead Agency has identified that a project that has the potential for significant effects, the Lead Agency can and should consider mitigation measures to ensure compliance pursuant to the provisions of the Solid Waste Diversion Goals and Integrated Waste Management Plan, as applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency:	The Project substantially conforms to this Mitigation Measure. The Project would comply with the City of Los Angeles Green Building Code, which requires the recycling and/or salvaging of 65 percent of non-hazardous construction and demolition waste. Construction and Demolition materials would be conveyed pursuant to the City's Waste Hauler Permit Program (Ordinance 181519), effective January 1, 2011. Under this Ordinance, all private waste haulers collecting solid waste within the City, including C&D waste, are required to obtain Assembly Bill 939 (AB 939) Compliance Permits and to transport C&D waste to City certified C&D processing facilities.
	<ul> <li>Integrate green building measures consistent with CALGreen (California Building Code Title 24) into project design including, but not limited to the following:</li> <li>Reuse and minimization of construction and demolition (C&amp;D) debris and diversion of C&amp;D waste</li> </ul>	
	trom landfills to recycling facilities.	
	<ul> <li>Source reduction through (1) use of materials that are more durable and easier to repair and maintain, (2) design to generate less scrap material through dimensional planning, (3) increased recycled content, (4) use of reclaimed materials, and (5) use of structural materials in a dual role as finish material (e.g., stained concrete flooring, unfinished ceilings, etc.).</li> </ul>	
	<ul> <li>Reuse of existing structure and shell in renovation projects.</li> </ul>	
	<ul> <li>Design for deconstruction without compromising safety.</li> </ul>	
	<ul> <li>Design for flexibility through the use of moveable walls, raised floors, modular furniture, moveable task lighting and other reusable building components.</li> </ul>	
	<ul> <li>Development of indoor recycling program and space.</li> </ul>	
	<ul> <li>Discourage the siting of new landfills unless all other waste reduction and prevention actions have been fully explored. If landfill siting or expansion is necessary, site landfills with an adequate landfill- owned, undeveloped land buffer to minimize the potential adverse impacts of the landfill in neighboring communities.</li> </ul>	
	<ul> <li>Locally generated waste should be disposed of regionally, considering distance to disposal site. Encourage disposal near where the waste originates as much as possible. Promote green technologies for long-distance transport of waste (e.g., clean engines and clean locomotives or electric rail for waste-by-rail disposal systems) and consistency with SCAQMD and 2016 RTP/SCS policies can and should be required.</li> </ul>	
	<ul> <li>Encourage waste reduction goals and practices and look for opportunities for voluntary actions to exceed the 50 percent waste diversion target.</li> </ul>	
	<ul> <li>Encourage the development of local markets for waste prevention, reduction, and recycling practices by supporting recycled content and green procurement policies, as well as other waste prevention, reduction and recycling practices.</li> </ul>	
	<ul> <li>Develop ordinances that promote waste prevention and recycling activities such as: requiring waste prevention and recycling efforts at all large events and venues; implementing recycled content procurement programs; and developing opportunities to divert food waste away from landfills and</li> </ul>	

Торіс	Measure	Applicability to the Project
	toward food banks and composting facilities.	
	<ul> <li>Develop alternative waste management strategies such as composting, recycling, and conversion technologies.</li> </ul>	
	<ul> <li>Develop and site composting, recycling, and conversion technology facilities that have minimum environmental and health impacts.</li> </ul>	
	<ul> <li>Require the reuse and recycle construction and demolition waste (including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard).</li> </ul>	
	<ul> <li>Integrate reuse and recycling into residential industrial, institutional and commercial projects.</li> </ul>	
	<ul> <li>Provide recycling opportunities for residents, the public, and tenant businesses.</li> </ul>	
	<ul> <li>Provide education and publicity about reducing waste and available recycling services.</li> </ul>	
	<ul> <li>Continue to adopt programs to comply with state solid waste diversion rate mandates and, where possible, encourage further recycling to exceed these rates.</li> </ul>	
	<ul> <li>Implement or expand city or county-wide recycling and composting programs for residents and businesses. This could include extending the types of recycling services offered (e.g., to include food and green waste recycling) and providing public education and publicity about recycling services.</li> </ul>	
Source: Southern Californ	nia Association of Governments, Final 2016 2016-2040 RTP/SCS Program Environmental Impact Report, Mitigatio	on Monitoring and Reporting Program, April 2016.

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# **CITY OF LOS ANGELES**

OFFICE OF THE CITY CLERK

ROOM 395, CITY HALL

LOS ANGELES, CALIFORNIA 90012

#### CALIFORNIA ENVIRONMENTAL QUALITY ACT

#### **INITIAL STUDY and CHECKLIST (CEQA Guidelines Section 15063)**

LEAD CITY AGENCY:	COUNCIL DISTRICT:	DATE:	
City of Los Angeles Department of City Planning	14 – José Huizar	March 2020	
RESPONSIBLE AGENCIES: Los Angeles Metro			
ENVIRONMENTAL CASE:	RELATED CASES:		
ENV-2019-2314-SCEA	CPC-2019-2313-GPAJ-VZCJ-SPR		
PREVIOUS ACTIONS CASE NO.	DOES have significant changes	from previous actions.	
N/A	DOES NOT have significant cha	nges from previous	
	actions.		

#### ENV PROJECT DESCRIPTION:

The Project proposes the development of a 5-story, 64.5-foot high mixed-use affordable housing building consisting 63 affordable units and 1 market rate manager's unit, 2,344 square feet of ground floor commercial space, and 50 total automobile parking spaces in a one level subterranean parking garage. The Project Site is approximately 47,239 square feet (1.08 acres) in size and would include approximately 77,945 square feet of building area and a floor area ratio (FAR) of 1.65 to 1. The Project would not require the demolition of any existing structures. However, part of the Project Site contains the Metro Soto Station Plaza, which the Project would be integrated with. Developments within the vicinity of the Project Site consist primarily of single-family and multifamily residences, and commercial uses along E. 1<sup>st</sup> Street. The Project Site is accessible by E. 1st Street with a street designation of Avenue II, S. Soto Street with a street designation of Avenue II and an alley, and located approximately four blocks east of the US-5 Freeway. To allow for the proposed development, the Project Applicant is requesting the following discretionary approvals: ((1) A General Plan Amendment per Los Angeles Municipal Code (LAMC) Section 11.5.6 to change the Land Use Designation from Low Medium II to Highway Oriented Commercial/Limited Commercial; (2) A JJJ complaint Vesting Zone Change per LAMC Section 12.32(Q) from C2-1-CUGU and RD1.5-1-CUGU to [T][Q]C2-1-1CUGU; (3) Utilizing Developer Incentives per LAMC Section 11.5.11(e) to allow: Rear Yard Reduction to 8' in lieu of 17', FAR Increase to 1.65:1 in lieu of 1.5:1, and Parking at 0.5 Spaces Per Unit, including 40% compact; (4) A Site Plan Review per LAMC Section 16.05; (5) Adoption of the SCEA; and (6) Approval of other permits, ministerial or discretionary, as maybe be necessary.

## **ENVIRONMENTAL SETTING:**

The Project Site includes six parcels (APNs 5183-009-904 through -907, -909, and -910). The approximately 47,239 square-foot (1.08-acre) Project Site contains the Metro Soto Station Plaza at the southwest corner of E. 1<sup>st</sup> Street and S. Soto Street in the Boyle Heights Community Plan Area. The Project Site is surrounded by adjacent residences to the south, residences and commercial uses to the west across an alleyway, residences to the east across S. Soto Street, and residences and commercial uses to the north across E. 1<sup>st</sup> Street.

PROJECT LOCATION: 111-121 S. Soto Street and 2316-2328 E. 1 <sup>st</sup> Street, Los Angeles, CA 90033				
COMMUNITY PLAN AREA:	Boyle Heights	AREA PLANNING	CERTFIED	
STATUS:		COMMISSION:	NEIGHBORHOOD	
Preliminary	Does Conform to Plan	East Los Angeles	COUNCIL:	
Proposed	Does NOT Conform to Plan		Boyle Heights	
EXISTING ZONING:	MAX DENSITY ZONING:	LA River Adjacent:		
C2-1-CUGU and	121 Dwelling Units	No		
RD1.5-1-CUGU				

#### Determination (To be completed by Lead Agency)

#### On the basis of this initial evaluation:

- □ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions on the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- □ I find the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- □ I find the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.
- I find that the Project is a qualified "transit priority project" that satisfies the requirements of Sections 21155 and 21155.2 of the Public Resources Code (PRC), and/or a qualified "residential or mixed use residential project" that satisfies the requirements of Section 21159.28(d) of the PRC, and although the project could have a potentially significant effect on the environment, there will not be a significant effect in this case, because the SUSTAINABLE COMMUNITIES ENVIRONMENTAL ASSESSMENT (SCEA) identified measures that either avoid or mitigate to a level of insignificance all potentially significant or significant effects of the Project.

Signature

Title

Phone

## **Evaluation of Environmental Impacts:**

- 1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants based on a project-specific screening analysis).
- 2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less that significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
- 4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of a mitigation measure has reduced an effect from "Potentially Significant Impact" to "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analysis," as described in (5) below, may be cross referenced).
- 5. Earlier analysis must be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR, or negative declaration. Section 15063 (c)(3)(D). In this case, a brief discussion should identify the following:
  - a. Earlier Analysis Used. Identify and state where they are available for review.
  - b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
  - c. Mitigation Measures. For effects that are "Less Than Significant With Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated
- 7. Supporting Information Sources: A sources list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whichever format is selected.
- 9. The explanation of each issue should identify:
  - a. The significance criteria or threshold, if any, used to evaluate each question; and
  - b. The mitigation measure identified, if any, to reduce the impact to less than significant.
#### **Environmental Factors Potentially Affected:**

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Less Than Significant With Mitigation Measures Incorporated" as indicated by the checklist on the following pages.

Aesthetics	Greenhouse Gas Emissions	Public Services
□ Agriculture & Forestry Resources	Hazards & Hazardous Materials	Recreation
Air Quality	Hydrology & Water Quality	Transportation
Biological Resources	Land Use & Planning	Tribal Cultural Resources
Cultural Resources	Mineral Resources	Utilities & Service Systems
Energy	Noise	Wildfire
Geology & Soils	Population & Housing	Mandatory Findings of
		Significance

INITIAL STUDY CHECKLIST (To be completed by the Lead City Agency)				
Background				
PROPONENT NAME:				
East LA Community Corporation				
APPLICANT ADDRESS:				
2917 E. 1 <sup>st</sup> Street				
Los Angeles, CA 90033				
AGENCY REQUIRING CHECKLIST:				
Department of City Planning				
PROPOSAL NAME (If Applicable):				
Los Lirios Mixed-Use Project				

#### PLEASE NOTE THAT EACH AND EVERY RESPONSE IN THE CITY OF LOS ANGELES INITIAL STUDY AND CHECKLIST IS SUMMARIZED FROM AND BASED UPON THE ENVIRONMENTAL ANALYSIS CONTAINED IN SECTION III OF THIS INITIAL STUDY. PLEASE REFER TO THE APPLICABLE RESPONSE IN SECTION III FOR A DETAILED DISCUSSION OF CHECKLIST DETERMINATIONS.

I. Exce	I. AESTHETICS Except as provided in Public Resources Code Section 21099, would the project:					
a.	Have a substantial adverse effect on a scenic vista?				X	
b.	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X	
c.	In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			X		
d.	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X		
In det Agricu mode timbe Fores Fores Air Re	In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California					
a.	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?				X	
b.	Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X	
С.	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				X	
d.	Result in the loss of forest land or conversion of forest land to non- forest use?				$\mathbf{X}$	

 

 e.
 Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

 III.
 AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

a.	Conflict with or obstruct implementation of the applicable air quality plan?			X	
b.	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?			X	
с.	Expose sensitive receptors to substantial pollutant concentrations?			X	
d.	Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			X	

X

		Potentially Significant	Less Than Significant with Mitigation	Less Than Significant	No
IV		impuet	meorporateu	impact	impact
a.	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?			X	
b.	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?				X
c.	Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d.	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				X
e.	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f.	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				$\boxtimes$
٧.	CULTURAL RESOURCES				
a.	Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?				X
b.	Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?			$\boxtimes$	
c.	Disturb any human remains, including those interred outside of dedicated cemeteries?			X	
VI.	ENERGY				
a.	Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			X	
b.	Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?			X	
VII.	GEOLOGY AND SOILS				
a.	Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:				
i.	Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			X	
ii.	Strong seismic ground shaking?			X	
iii.	Seismic-related ground failure, including liquefaction?			×	
iv.	Landslides?			X	
b.	Result in substantial soil erosion or the loss of topsoil?			X	

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c.	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
d.	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?			X	
e.	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X
f.	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			X	
VIII.	GREENHOUSE GAS EMISSIONS				
a.	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b.	Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	
IX.	HAZARDS AND HAZARDOUS MATERIALS				
a.	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b.	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	
c.	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X	
d.	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?			X	
e.	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?				X
f.	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
g.	Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?				X
х.	HYDROLOGY AND WATER QUALITY				
a.	Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?			X	
b.	Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			X	
с.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:			X	
i.	Result in substantial erosion or siltation on- or off-site;			X	

r

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
ii.	Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;			X	
iii.	Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or			X	
iv.	Impede or redirect flood flows?				X
d.	In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?				X
e.	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			X	
XI.	LAND USE AND PLANNING				
a.	Physically divide an established community?				X
b.	Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?			X	
XII.	MINERAL RESOURCES				
а.	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b.	Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X
XIII.	NOISE				
a.	Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
b.	Generation of excessive groundborne vibration or groundborne noise levels?			X	
C.	For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X
XIV.	POPULATION AND HOUSING				
a.	Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X	
b.	Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X
<b>XV.</b> Would facilit impac	PUBLIC SERVICES d the project result in substantial adverse physical impacts associated wi ies, need for new or physically altered governmental facilities, the cor cts, in order to maintain acceptable service ratios, response times or oth	ith the provisic nstruction of w ner performan	on of new or physi which could cause ce objectives for a	ically altered go e significant en any of the publ	overnmental vironmental ic services:
a.	Fire protection?			X	
b.	Police protection?			X	
с.	Schools?			X	
d.	Parks?			X	
e.	Other public facilities?			X	

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI.	RECREATION			<u> </u>	•
a.	Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			X	X
b.	Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				
XVII.	TRANSPORTATION	I			
a.	Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?			X	
b.	Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?			$\boxtimes$	
с.	Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
d.	Result in inadequate emergency access?			X	
sectio landsc a.	a the project cause a substantial adverse change in the significance of a n 21074 as either a site, feature, place, cultural landscape that is geogra cape, sacred place, or object with cultural value to a California Native Ar Listed or eligible for listing in the California Register of Historical Resources or in a local register of historical resources as defined in	aphically defin merican tribe,	ed in terms of the and that is:	e size and scop	e of the
	Public Resources Code section 5020.1(k), or				
D.	A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.		X		u
XIX.	UTILITIES AND SERVICE SYSTEMS	1		1	
a.	Require or result in the relocation or construction of new or expanded water, or wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities or expansion of existing facilities, the construction or relocation of which could cause significant environmental effects?			X	
b.	Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			X	
C.	Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			X	
d.	Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?			X	
e.	Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			X	

			Less Than		
		<b>.</b>	Significant		
		Potentially	With	Less Than	Na
		Significant	iviitigation	Significant	NO
-		Impact	Incorporated	Impact	Impact
<b>XX.</b> If loca	WILDFIRE ted in or near state responsibility areas or lands classified as very high f	ire hazard sev	erity zones, woul	d the project:	
a.	Substantially impair an adopted emergency response plan or emergency evacuation plan?				$\boxtimes$
b.	Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?				X
C.	Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?				X
d.	Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?				X
XXI.	MANDATORY FINDINGS OF SIGNIFICANCE				
a.	Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?			X	
b.	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?			$\square$	
C.	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X	

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## INTRODUCTION

This section of the SCEA contains an assessment and discussion of impacts associated with each environmental issue and subject area identified in the Initial Study Checklist. The thresholds of significance are based on the CEQA Guidelines Appendix G Environmental Checklist Form. The *L.A. CEQA Thresholds Guide* (2006) is utilized only where applicable and relevant in assisting the Appendix G thresholds.

## 1. **AESTHETICS**

Senate Bill (SB) 743 [Public Resources Code (PRC) Section 2100990(d)]) esets for the set of the section 450.2

Regulations." PRC Section 21064.3 defines "major transit s station, a ferry terminal served by either a bus or rail tran major bus routes with a frequency of service interval o afternoon peak commute periods." PRC Section 21099 of project located on property zoned for commercial uses w that is located within a transit priority area. PRC Section 210 an urban area that has been previously developed, or on perimeter of the site adjoins, or is separated only by an ir are developed with qualified urban uses.

The related City of Los Angeles Department of City Plan

is a mixed-use development containing residential and commercial uses on an infill site within a TPA and therefore, PRC Section 21099(d) applies to the Project and the Project is exempt from aesthetic impacts. The analysis in this initial study is for informational purposes only and not for determining whether the Project will result in significant impacts to the environment. Any aesthetic impact analysis in this initial study is included to discuss what aesthetic impacts would occur from the Project if PRC Section 21099(d)

<sup>&</sup>lt;sup>1</sup> City of Los Angeles Department of City Planning, Zoning Information File ZA No. 2452, Transit Priority Areas (TPAs)/Exemptions to Aesthetics and Parking within TPAs Pursuant to CEQA. Available at: http://zimas.lacity.org/documents/zoneinfo/ZI2452.pdf. Accessed October 24, 2019.

was not in effect. As such, nothing in the aesthetic impact discussion in this initial study shall trigger the need for any CEQA findings, CEQA analysis, or CEQA mitigation measures.

The following analysis utilizes information provided in the Los Lirios Apartments Arborist Report, prepared by James Komen, December 16, 2019 (Tree Report); and the Record Search Results for the Proposed Los Lirios Mixed-Use Project, prepared by the South Central Coastal Information Center, June 26, 2019 (Historic Records Search). The Tree Report is available as Appendix A and the Historic Records Search is available as Appendix B.

### a) Would the project have a substantial adverse effect on a scenic vista?

**No Impact**. Scenic vistas are generally described in two ways: panoramic views (visual access to a large geographic area, for which the field of view can be wide and extend into the distance); and focal views (visual access to a particular object, scene, or feature of interest). The Project Site is located within a high-density urban area and two of the Project Site's parcels are currently vacant. The other four parcels include the Metro Soto Station and Plaza. The Project Site is surrounded by adjacent residences to the south, residences and commercial uses to the west across an alleyway, residences to the east across S. Soto Street, and residences and commercial uses to the north across E. 1<sup>st</sup> Street.

The Project Site is comprised of six parcels within a developed area of the Boyle Heights Community Planning area of the City of Los Angeles and does not possess any unique aesthetic characteristics. The Project would improve the Project Site with a new five-story, 64.5-foot high mixed-use affordable housing building consisting 63 affordable units and one market-rate manager's unit, 2,443 square feet of ground floor commercial space, and 50 total automobile parking spaces in a one level subterranean parking garage. Additionally, 8,171 square feet of open space will be provided via a central courtyard, community terrace, roof terrace, community room, exercise room, and private balconies. Due to the relatively level topography and extent of development within the immediate area, there are no scenic views or vantage points that afford scenic views. Therefore, no significant impact to any recognized or valued scenic view would occur.

## b) Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?

**No Impact.** The Project Site is bounded by E. 1<sup>st</sup> Street to the north, S. Soto Street to the east, an alley to the west, and a private property improved with a multi-family residential building to the south. There are no State-designated scenic highways or highways eligible for scenic designation in the Project Site vicinity.<sup>2</sup> There are also no locally-designated scenic highways in the Project Site vicinity.<sup>3</sup> The Project Site currently contains four vacant parcels and two parcels containing Metro Soto Station and Plaza. The Metro Station is not considered a scenic resource. The Project Site does not contain any natural scenic resources, such as native habitat, locally protected tree species, or unique geologic features. As detailed in the Project's Tree Report, there are 29 trees on the Project Site, none of which are classified as a protected native species. All but 19 trees would be removed for the construction of the Project. As concluded in the Historic Records Search, there are no designated historic resources on the site. Because there are no

ArcGIS, California Scenic Highways,, website: https://www.arcgis.com/home/webmap/viewer.html?useExisting=1&layers=f0259b1ad0fe4093a5604c9b838a
 486a, accessed: August 2019.

<sup>&</sup>lt;sup>3</sup> City of Los Angeles Department of City Planning, Mobility Plan 2035, Citywide General Plan Circulation System, Map A5 – Central, East and Cornfield Arroyo Secco Plan (CASP) Subarea, September 2016.

scenic resources on the Project Site, and the Site is not within a State scenic highway, there would be no impact.

c) For a project in a non-urbanized area, would it substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point.) For a project in an urbanized area, would it conflict with applicable zoning and other regulations governing scenic quality?

**Less Than Significant Impact.** The existing visual character of the Project Site is located in a highly urbanized area, surrounded by a variety of land uses including commercial and residential uses. As stated earlier, the Project Site is currently vacant and includes the Metro Soto Station Plaza.

The Project Site is in an urbanized area and would not conflict with applicable zoning and regulations that govern scenic quality as discussed in detail in Section VI.11, *Land Use and Planning*. The Project is designed to integrate a new mixed-use building into a cohesive, pedestrian-friendly environment that would enliven the Metro Soto Station Plaza as well as the street frontages along E. 1<sup>st</sup> Street and S. Soto Street with ground level commercial uses and subterranean parking that is hidden from the street. The new street level public plaza area would include landscaping and would open up visually to the public.

The Project would also upgrade the visual character by providing new trees and landscaping along the Project perimeter. Native and drought tolerant plants would also be integrated to reduce water requirements. The proposed building would provide a variety of architectural materials and building planes and ground-level façade transparency, with special attention to the surrounding environment while also providing a pedestrian-scale street level. The design of the proposed building alternates different textures, colors, materials, and distinctive architectural treatments to add visual interest and to avoid repetitive façades. Because the project would not conflict with applicable zoning and other regulations governing scenic quality, this impact would be less than significant.

# d) Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

**Less Than Significant Impact.** The Project is located in a well-lit mixed-use area of the City where there are moderate to high levels of ambient nighttime lighting, including street lighting, vehicle headlights, architectural and security lighting, and indoor building illumination (light emanating from structures which passes through windows), all of which are common to densely populated areas. Artificial light impacts are largely a function of proximity. The Project Site is located within a mixed-use environment, so that light emanating from any one source contributes to lighting impacts rather than being solely responsible for lighting impacts on a particular use. As uses surrounding the Project Site are already impacted by lighting from existing development within the area, the amount of new light sources must be highly visible from light-sensitive uses to have any notable effect.

Per LAMC Section 41.40, construction activities are prohibited between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday, and between 6:00 p.m. and 8:00 a.m. on Saturday. Construction activities are prohibited on Sundays and all federal holidays. Therefore, construction would occur primarily during daylight hours, and construction lighting would only be used for the duration needed if construction were to occur during evening hours. During operations, the Project's mix of uses would generate levels of interior and exterior lighting for security, parking entrances, signage and architectural highlighting, similar to other uses in the area. Soft accent lighting used for signage, and architectural highlighting would be directed to permit visibility of the highlighted elements but would not be so bright as to cause substantial light spill off the Project Site.

Outdoor lighting would be designed and installed with shielding, such that lighting would be directed and focused on the Project Site and not on adjacent residential properties in accordance with LAMC lighting regulations which require that operational lighting will be directed downward or on the specific on-site feature to be lit or avoid direct glare onto exterior glazed windows or glass doors of existing and adjacent uses. Proposed signage and outdoor lighting would be subject to applicable regulations contained within the LAMC. Specifically, LAMC Section 93.0117(b) limits lighting intensity or direct glare onto exterior glazed windows or glass doors of any property containing residential units; elevated habitable porch, deck, or balcony on any property containing residential units; or any ground surface intended for uses such as recreation, barbecue or lawn areas or any other property containing a residential unit or units.

LAMC Section 14.4.4.E, requires that no sign shall be arranged and illuminated in a manner that would produce a light intensity of greater than three foot-candles above ambient lighting, as measured at the property line of the nearest residentially zoned property. Therefore, light impacts are considered less than significant.

Existing glare in the Project area is not substantial and is typical of a highly urbanized area, with sunlight reflected off of reflective materials utilized in buildings and from vehicle windows and other surfaces. In accordance with City requirements (i.e. Chapter 9, Article 3, Division 1, Section 93.017(b))the exterior of the proposed structure would use materials such as, high-performance and/or low-reflective glass (no mirrorlike tints or films) and pre-cast concrete or fabricated wall surfaces that would minimize glare and reflected heat. To the extent glare is experienced by adjacent uses or the occupants of vehicles on nearby streets it would be temporary, changing with the movement of the sun throughout the course of the day and the seasons of the year. Based on the above, glare impacts are not expected to be substantial or to adversely affect day or night views. Therefore, glare impacts are considered less than significant.

### **Cumulative Impacts**

**Less Than Significant Impact.** Development of the Project in conjunction with related projects would result in an incremental intensification of land uses in a heavily urbanized area of the City of Los Angeles. Because of the area's dense urban fabric, public scenic views are generally available only through public street corridors and from public parks that have street corridor views or are set back from existing buildings.

Related projects in combination with the Project are located within designated urban lots planned for development and would not encroach upon public views through street corridors. Although some views of architecturally or historically important buildings could be obscured by taller buildings constructed within a line of sight over existing low rise development and parking lots, there would be limited potential for such occurrences and views of primary facades of architecturally or historically important buildings would not likely be affected. In addition, most development of a larger scale would be subject to environmental review and indirect impacts on historic resources or other scenic resources would be mitigated to the degree feasible. Accordingly, as the Project would not have direct or indirect impacts on scenic resources, its contribution to impacts on views of scenic resources from other related projects would not be cumulatively considerable and cumulative impacts would be less than significant.

Because the visual character of the area is defined by a range of diverse architecture that is generally not cohesive, and in many areas, like the Project Site, lacks a high level of visual quality, it is anticipated that new development would in general upgrade the visual quality of the area. New development subject to discretionary approval would conform to the City's design standards, and it is therefore anticipated that new development would reflect high quality design and would not degrade the visual character of the area. Accordingly, as the related projects and the Project would not degrade the visual character of the

Project area, the Project's contribution to adverse impacts on visual character would not be cumulatively considerable and cumulative impacts would be less than significant.

Cumulative light and glare effects would be consistent with the existing urban environment, which is characterized by high ambient light levels. Because lighting, including illuminated signage and outdoor lighting would be subject to regulations contained within the LAMC, compliance would ensure that impacts regarding lighting for the Project and related projects would not significantly impact sensitive uses. Accordingly, the Project's contribution to light and glare impacts would not be cumulatively considerable and cumulative impacts would be less than significant.

## 2. AGRICULTURE AND FORESTRY RESOURCES

### a) Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?

**No Impact.** The Project Site is located in a highly urban area and two of the Project Site's parcels are currently vacant. The other four Project parcels include the Metro Soto Station and Plaza. No agricultural uses, or related farmland operations, are present within the Project Site or surrounding area. The Project Site is not located on designated Prime Farmland, Unique Farmland, or Farmland of Statewide Importance as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program (FMMP).<sup>4</sup> Therefore, no impact would occur and no mitigation measures are required.

## b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

**No Impact.** The Project Site is located within the Boyle Heights Community Plan area. The Applicant is requesting a GPA per LAMC Section 11.5.6 to change the Land Use Designation from Low Medium II to Highway Oriented Commercial/Limited Commercial. In addition, the applicant is requesting a JJJ complaint Vesting Zone Change per LAMC Section 12.32(Q) from C2-1-CUGU and RD1.5-1-CUGU to [T][Q]C2-1-1CUGU. The existing and proposed land use designation and zonings for the Project do not allow agricultural production, and there is no farmland at the Project Site. As such, the Project Site is not zoned for agricultural use, nor are there any agricultural uses currently occurring at the Project Site or within the surrounding area. Moreover, according to the State's most recent Williamson Act land data, neither the Project Site nor surrounding area are under a Williamson Act contract.<sup>5</sup> Thus, Project implementation would not conflict with Williamson Act contact land nor would the Project conflict with agricultural zoning. Therefore, no impact would occur and no mitigation measures are required.

<sup>&</sup>lt;sup>4</sup> State of California Department of Conservation, California Important Farmland Finder, website: https://maps.conservation.ca.gov/dlrp/ciff/, accessed: August 2019.

<sup>&</sup>lt;sup>5</sup> California Department of Conservation, The California Land Conservation Act of 1965, 2016 Status Report, published December 2016, website: https://www.conservation.ca.gov/dlrp/wa/Documents/stats\_reports/2016%20LCA%20Status%20Report.pdf, accessed: August 2019.

### c) Would the project Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

**No Impact.** In the City, forest land is a permitted use in areas zoned OS (Open Space); however, the City does not have specific zoning for timberland or Timberland Production. The Applicant is requesting a GPA per LAMC Section 11.5.6 to change the Land Use Designation from Low Medium II to Highway Oriented Commercial/Limited Commercial. In addition, the Applicant is requesting a JJJ complaint Vesting Zone Change per LAMC Section 12.32(Q) from C2-1-CUGU and RD1.5-1-CUGU to [T][Q]C2-1-1CUGU. The existing and proposed land uses and zoning at the Project Site do not include or permit forest land, timberland, or Timberland Production land uses. Therefore, no impact would occur and no mitigation measures are required.

### d) Would the project result in the loss of forest land or conversion of forest land to non-forest use?

**No Impact.** The Project Site is located within a highly urbanized area and two of the Project Site's parcels are currently vacant. The other four Project parcels include the Metro Soto Station and Plaza. No forest land exists on or in the vicinity of the Project Site, and Project implementation would not result in the loss or conversion of forest land. See also the discussion under threshold question 2.c), above. Therefore, no impact would occur and no mitigation measures are required.

# e) Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

**No Impact.** As discussed in the above threshold questions, the Project Site is located within a highly urbanized area and two of the Project Site's parcels are currently vacant. The other four Project parcels include the Metro Soto Station and Plaza. No agricultural uses, designated Farmland, or forest land uses occur at the Project Site or within the surrounding area. As such, implementation of the Project would not result in the conversion of existing Farmland, agricultural uses, or forest land on- or off-site. Therefore, no impact would occur and no mitigation measures are required.

#### **Cumulative Impacts**

**No Impact.** As with the Project, the related projects are located within a developed, urbanized area of the City of Los Angeles generally zoned for commercial and residential uses and their project sites do not support existing farming, agricultural or forest-related operations. Therefore, development of the related projects together with the Project would not result in the conversion of State-designated agricultural land from an agricultural use to a non-agricultural use, or result in the loss of forest land or the conversion of forest land to non-forest use.

## 3. AIR QUALITY

The following analysis utilizes information provided in the *Air Quality and Noise Analyses, Los Lirios Mixed-Use Project*, prepared by Pomeroy Environmental Services, April 2019 (Air Quality and Noise Report); and the *Transportation Impact Study, Los Lirios Mixed-Use Project*, prepared by Linscott, Law & Greenspan, Engineers, July 18, 2018 (Transportation Study). The Air Quality and Noise Report is available as Appendix C and the Transportation Study is available as Appendix D.

### a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact. The South Coast Air Quality Management District SCAQMD is directly responsible for reducing emissions from stationary (area and point), mobile, and indirect sources to meet federal and State ambient air quality standards. It has responded to this requirement by preparing a series of Air Quality Management Plans (AQMPs). The most recent of these was adopted by the Governing Board of the SCAQMD on March 3, 2017. This AQMP, referred to as the 2016 AQMP, was prepared to comply with the federal and State Clean Air Acts and amendments, to accommodate growth, to reduce the high levels of pollutants in the Basin, to meet federal and State air quality standards, and to minimize the fiscal impact that pollution control measures have on the local economy. The 2016 AQMP identifies the control measures that will be implemented over a 15-year horizon to reduce major sources of pollutants. Implementation of control measures established in the previous AQMPs has substantially decreased the population's exposure to unhealthful levels of pollutants, even while substantial population growth has occurred within the Basin. The future air guality levels projected in the 2016 AQMP are based on several assumptions. For example, the SCAQMD assumes that general new development within the Basin will occur in accordance with population growth and transportation projections identified by the Southern California Association of Governments (SCAG) in its most current version of the Regional Transportation Plan/Sustainable Communities Strategy (2016–2040 RTP/SCS), which was adopted April 7, 2016. The 2016 AQMP also assumes that general development projects will include strategies (mitigation measures) to reduce emissions generated during construction and operation in accordance with SCAQMD and local jurisdiction regulations, which are designed to address air quality impacts and pollution control measures.

For development projects, SCAQMD recommends that consistency with the current AQMP be determined by comparing the population generated by a project to the population projections used in the development of the AQMP. The Project is located within the Boyle Heights Community Plan area. As part of the City's General Plan, the Boyle Heights Community Plan (Community Plan) was adopted in 1998 and sets forth goals, objectives, policies, and implementation programs that pertain to the Boyle Heights. The Community Plan offers projections for population, housing, and employment for the area up to the year 2010. Since the Project is expected to become operational in 2021 this report analyzes compliance with the AQMP through SCAG's population estimates in the 2016–2040 RTP/SCS as they are the most current estimates. Projects that are consistent with SCAG's applicable growth projections would not interfere with air quality attainment because this growth is included in the projections used in the formulation of the 2016 AQMP. As such, projects, land uses, and activities that are consistent with the applicable assumptions used in the development of the AQMP would not jeopardize attainment of the air quality levels identified in the AQMP. The Project would comply with all SCAQMD rules and regulations that are applicable to the Project; the Project Applicant is not requesting any exemptions from the currently adopted or proposed SCAQMD rules.

The Project would improve the Project Site with a new five-story, 64.5-foot high mixed-use affordable housing building consisting 63-affordable units and one market-rate manager's unit, 2,443 square feet of ground floor commercial space, and 50 total automobile parking spaces in a one level subterranean parking garage. As part of its comprehensive planning process for the Southern California region, SCAG has divided its jurisdiction into 14 subregions. The Project Site is located within the City of Los Angeles subregion, which includes all areas within the boundaries of the City of Los Angeles. SCAG's 2012 housing estimates for the City are 1,325,500 total housing units and estimates the housing of the City will increase

to 1,690,300 housing units by 2040, a 27.5 percent increase.<sup>6</sup> The Project's addition of 64 housing units would account for less than 0.02 percent of the total growth from 2012 to 2040. Thus, the Project's relatively small increase in housing would not have the potential to conflict with the regional growth projections for the Los Angeles subregion. In addition, and further discussed herein, the Project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. Thus, the Project would not impair implementation of the AQMP, and this impact would be less than significant.

# b) Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

**Less Than Significant Impact.** Measurements of ambient concentrations of the criteria pollutants are used by the U.S. EPA and the California Air Resources Board (ARB) to assess and classify the air quality of each air basin, county, or, in some cases, a specific urbanized area. The classification is determined by comparing actual monitoring data with national and State standards. If a pollutant concentration in an area is lower than the standard, the area is classified as being in "attainment." If the pollutant exceeds the standard, the area is classified as a "non-attainment" area. If there is not enough data available to determine whether the standard is exceeded in an area, the area is designated "unclassified." Attainment status of the Basin with regard to the national ambient air quality standards (NAAQS) and California ambient air quality standards (CAAQS) are shown in Table VI-1, Attainment Status for the South Coast Air Basin. As shown, the Basin is in nonattainment for ozone,  $PM_{10}$  and  $PM_{2.5}$ .

<sup>&</sup>lt;sup>6</sup> Southern California Association of Governments, 2016-2040 Regional Transportation Plan/Sustainable Communities Strategies, Demographics and Growth Forecast Appendix, Adopted April 2016, website: http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS\_DemographicsGrowthForecast.pdf, page 24 accessed: August 2019.

	Attainment Status			
Pollutant	NAAQS	CAAQS		
Ozone (1-Hour)	Non-Attainment (Extreme)	Non-Attainment		
Ozone (8-Hour)	Pending – Expect Non-Attainment (Extreme)	Non-Attainment		
Carbon Monoxide (1- & 8-hour)	Attainment (Maintenance)	Attainment		
Nitrogen Dioxide (1-Hour)	Unclassifiable/Attainment	Attainment		
Nitrogen Dioxide (Annual)	Attainment (Maintenance)	Attainment		
Sulfur Dioxide (1-Hour)	Designations Pending (expect Unclassified/Attainment)	Attainment		
Sulfur Dioxide (24-Hour & Annual)	Unclassified/Attainment	attainment		
PM <sub>10</sub> (24-Hour)	Attainment (Maintenance)	Non-Attainment		
PM <sub>10</sub> (Annual)	N/A	Non-Attainment		
PM <sub>2.5</sub> (24-Hour)	Non-Attainment (Serious)	N/A		
PM <sub>2.5</sub> (Annual)	Non-Attainment (Moderate)	Non-Attainment		
Lead	Non-Attainment (Partial)	Attainment		
Source: SCAQMD, Air Quality Management Plan Appendix II website: http://www.aqmd.gov/docs/default-source/clean-air-				

 Table VI-1

 Attainment Status for the South Coast Air Basin

Source: SCAQMD, Air Quality Management Plan Appendix II website: http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plan/final-2016-aqmp/appendix-ii.pdf?sfvrsn=4, accessed: August 2019.

Because the South Coast Air Basin is currently in nonattainment for ozone, PM<sub>10</sub> and PM<sub>2.5</sub>, related projects may exceed an air quality standard or contribute to an existing or projected air quality exceedance. With respect to determining the significance of the Project contribution, the SCAQMD neither recommends quantified analyses of construction and/or operational emissions from multiple development projects nor provides methodologies or thresholds of significance to be used to assess the cumulative emissions generated by multiple cumulative projects. Instead, the SCAQMD recommends that a project's potential contribution to cumulative impacts be assessed utilizing the same significance criteria as those for project specific impacts. Furthermore, the SCAQMD states that if an individual development project generates less-than-significant construction or operational emissions impacts, then the development project would not contribute to a cumulatively considerable increase in emissions for those pollutants for which the Basin is in nonattainment.<sup>7</sup>

A project may have a significant impact if project-related emissions would exceed federal, state, or regional standards or thresholds, or if project-related emissions would substantially contribute to an existing or projected air quality violation. The Project Site is located in the South Coast Air Basin (Basin). The South Coast Air Quality Management District (SCAQMD) is the air pollution control agency for the Basin. To address potential impacts from construction and operational activities, the SCAQMD currently recommends that impacts from projects with mass daily emissions that exceed any of the thresholds outlined in Table VI-2, SCAQMD Thresholds of Significance, be considered significant. The City defers to these thresholds for the evaluation of construction and operational air quality impacts.

<sup>&</sup>lt;sup>7</sup> South Coast Air Quality Management District, White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution, Appendix A, August 2003.

Pollutant	Construction Thresholds (lbs/day)	Operational Thresholds (lbs/day)				
Volatile Organic Compounds (VOC)	75	55				
Nitrogen Oxides (NO <sub>x</sub> )	100	55				
Carbon Monoxide (CO)	550	550				
Sulfur Oxides (SO <sub>x</sub> )	150	150				
Particulate Matter (PM10)	150	150				
Fine Particulate Matter (PM <sub>2.5</sub> )	55	55				
Note: lbs = pounds.						
Source: SCAQMD CEQA Handbook (SCAQMD, 1993), SCAQMD Air Quality Significance Thresholds, website: http://aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-						

Table VI-2
SCAQMD Thresholds of Significance

thresholds.pdf?sfvrsn=2; accessed: August 2019.

### **Regional Construction Emissions**

For purposes of analyzing impacts associated with air quality, this analysis assumes a construction schedule of approximately 20 months, which is a conservative estimate and yields the maximum daily impacts. Shoring, excavation and site preparation would occur for approximately one month with an export of approximately 12,908 cubic yards of soil. Building construction would occur for approximately 19 months. This phase would include the construction of the proposed structure, connection of utilities, laying irrigation for landscaping, architectural coatings, and landscaping the Project Site. These construction activities would temporarily create emissions of dusts, fumes, equipment exhaust, and other air contaminants. Construction activities involving grading and site preparation would primarily generate PM<sub>2.5</sub> and PM<sub>10</sub> emissions. Mobile sources (such as diesel-fueled equipment onsite and traveling to and from the Project Site) would primarily generate  $NO_x$  emissions. The application of architectural coatings would primarily result in the release of ROG emissions. The amount of emissions generated on a daily basis would vary, depending on the amount and types of construction activities occurring at the same time. The analysis of daily construction emissions has been prepared utilizing the California Emissions Estimator Model (CalEEMod 2016.3.2) recommended by the SCAQMD to quantify the estimated daily emissions associated with Project construction. The results are presented in Table VI-3, Estimated Peak Daily Construction Emissions, which identifies daily emissions that are estimated to occur on peak construction days for each construction phase.

	Emissions in Pounds per Day						
Emissions Source	ROG	NOx	со	SOx	PM10	PM2.5	
Shoring/Excavation/Site Preparation Phase							
Fugitive Dust					2.09	1.12	
Off-Road Diesel Equipment	1.35	15.09	6.45	0.01	0.68	0.63	
On-Road Diesel (Hauling)	0.66	21.37	4.97	0.06	1.35	0.42	
Worker Trips	0.04	0.03	0.32	0.01	0.09	0.02	
Total Emissions	2.05	36.49	11.74	0.08	4.21	2.19	
SCAQMD Thresholds	75.00	100.00	550.00	150.00	150.00	55.00	
Significant Impact?	No	No	No	No	No	No	
Building Construction Phase							
Building Construction Off-Road Diesel Equipment	2.03	14.79	13.19	0.02	0.80	0.77	
Building Construction Vendor Trips	0.04	1.28	0.37	0.01	0.08	0.03	
Building Construction Worker Trips	0.30	0.21	2.37	0.01	0.67	0.18	
Architectural Coatings	11.09						
Architectural Coating Off-Road Diesel Equipment	0.22	1.53	1.82	0.01	0.09	0.09	
Architectural Coatings Worker Trips	0.06	0.04	0.44	0.01	0.14	0.04	
Total Emissions	13.74	17.85	18.19	0.06	1.78	1.11	
SCAQMD Thresholds	75.00	100.00	550.00	150.00	150.00	55.00	
Significant Impact?	No	No	No	No	No	No	
Note: Calculations assume compliance w	ith SCAQMD R	ule 403 – Fugit	ive Dust.				

Table VI-3 Estimated Peak Daily Construction Emissions

See Appendix C for calculation sheets.

These calculations assume compliance with SCAQMD Rule 1113 – Architectural Coatings and appropriate dust control measures would be implemented as part of the Project during each phase of development as required by SCAQMD Rule 403 – Fugitive Dust. Specific Rule 403 control requirements include, but are not limited to, applying water in sufficient quantities to prevent the generation of visible dust plumes (at least two times per day), applying soil binders to uncovered areas, reestablishing ground cover as quickly as possible, utilizing a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the Project Site, and maintaining effective cover over exposed areas. As shown in Table VI-3, construction-related daily emissions associated with the Project would not exceed any regional SCAQMD significance thresholds for criteria pollutants during the construction phases. Therefore, regional construction impacts are considered to be less than significant. Localized air quality emissions are addressed below.

### **Regional Operational Emissions**

The Project would improve the Project Site with a new five-story, 64.5-foot high mixed-use affordable housing building consisting 63 affordable units and one market-rate manager's unit, 2,443 square feet of ground floor commercial space, and 50 total automobile parking spaces in a one level subterranean parking garage. Operational emissions generated by area sources, motor vehicles and energy demand would result from normal day-to-day activities of the Project. The analysis of daily operational emissions associated with the Project has been prepared utilizing CalEEMod 2016.3.2 recommended by the SCAQMD. The results of these calculations are presented in Table VI-4, Estimated Daily Operational Emissions. As shown, the operational emissions generated by the Project would not exceed the regional thresholds of significance set by the SCAQMD. Therefore, impacts associated with regional operational emissions from the Project would be less than significant. Localized air quality emissions are addressed below.

Furthering County	Emissions in Pounds per Day						
Emissions Source	ROG	NOx	со	SOx	PM10	PM2.5	
Summertime (Smog Season) Emissions							
Area Sources	1.98	1.05	5.88	<0.01	0.11	0.11	
Energy Demand	0.04	0.34	0.21	<0.01	0.03	0.03	
Mobile (Motor Vehicles)	0.85	3.82	10.26	0.03	2.70	0.74	
Total Project Emissions	2.87	5.21	16.35	0.04	2.83	0.88	
SCAQMD Thresholds	55.00	55.00	550.00	150.00	150.00	55.00	
Potentially Significant Impact?	No	No	No	No	No	No	
Wintert	ime (Non-Sm	og Season) I	Emissions				
Area Sources	1.98	1.05	5.88	<0.01	0.11	0.11	
Energy Demand	0.04	0.34	0.21	<0.01	0.03	0.03	
Mobile (Motor Vehicles)	0.82	3.90	9.86	0.03	2.70	0.74	
Total Project Emissions	2.85	5.28	15.95	0.04	2.83	0.88	
SCAQMD Thresholds	55.00	55.00	550.00	150.00	150.00	55.00	
Potentially Significant Impact?	No	No	No	No	No	No	
Note: Column totals may not add due to rou See Appendix C for calculation sheets.	inding from the	e model result	Ś.				

#### Table VI-4 Estimated Daily Operational Emissions

As discussed above, the mass daily construction and operational emissions generated by the Project would not exceed any of the thresholds of significance recommended by the SCAQMD. In addition, as discussed under threshold question a), the Project would not exceed SCAG projections for the City population and is therefore consistent with the AQMP. Also, as discussed below, localized emissions generated by the Project would not exceed the SCAQMD's Localized Significance Thresholds (LSTs). Therefore, the Project would not contribute a cumulatively considerable increase in emissions for the pollutants which the Basin is in nonattainment. Thus, cumulative air quality impacts associated with the Project would be less than significant.

### c) Would the project expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. Land uses that are considered more sensitive to changes in air quality than others are referred to as sensitive receptors. Land uses such as primary and secondary schools, hospitals, and convalescent homes are considered to be sensitive to poor air quality because the very young, the old, and the infirm are more susceptible to respiratory infections and other air quality-related health problems than the general public. Residential uses are considered sensitive because people in residential areas are often at home for extended periods of time, so they could be exposed to pollutants for extended periods. Recreational areas are considered moderately sensitive to poor air quality because vigorous exercise associated with recreation places a high demand on the human respiratory function. The nearest air quality sensitive receptors to the Project Site are:

- adjacent residences to the south;
- residences to the west (20 feet);
- residences to the east (85 feet);
- residences to the north (150 feet); and
- school use to the southwest (480 feet).

### Localized Emissions

Emissions from construction activities have the potential to generate localized emissions that may expose sensitive receptors to harmful pollutant concentrations. The SCAQMD has developed localized significance threshold (LST) look-up tables for project sites that are one, two, and five acres in size to simplify the evaluation of localized emissions at small sites. LSTs are provided for each Source Receptor Area (SRA) and various distances from the source of emissions.

In the case of this analysis, the Project Site is located within SRA 1 covering the Central Los Angeles area. The nearest sensitive receptors to the Project Site are residential uses within 25 meters. The closest receptor distance in the SCAQMD's mass rate look-up tables is 25 meters. Projects that are located closer than 25 meters to the nearest receptor are directed to use the LSTs for receptors located within 25 meters. The Project Site is 1.08 acres in size. Therefore, consistent with SCAQMD recommendations, the LSTs for a one-acre site in SRA 1 with receptors located within 25 meters have been used to address the potential localized NOx, CO, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions to the area surrounding the Project Site.

As shown in Table VI-5, Localized On-Site Peak Daily Construction Emissions, peak daily emissions generated within the Project Site during construction activities for each phase would not exceed the applicable construction LSTs for a one-acre site in SRA 1. Therefore, localized air quality impacts from Project construction activities on the off-site sensitive receptors would be less than significant.

	Total On-site Emissions (Pounds per Day)				
Construction Phase *	NO <sub>x</sub> <sup>b</sup>	со	<b>PM</b> 10	PM2.5	
Shoring/ Site Preparation Emissions	15.09	6.45	2.77	1.75	
SCAQMD Localized Thresholds	74.00	680.00	5.00	3.00	
Potentially Significant Impact?	No	No	No	No	
Building Construction Emissions	16.32	15.01	0.89	0.86	
SCAQMD Localized Thresholds	74.00	680.00	5.00	3.00	
Potentially Significant Impact?	No	No	No	No	

 Table VI-5

 Localized On-Site Peak Daily Construction Emissions

Note: Calculations assume compliance with SCAQMD Rule 403 – Fugitive Dust. Building construction emissions include architectural coatings.

<sup>a</sup> The Project Site is 1.06 acres. Consistent with SCAQMD recommendations, the localized thresholds for all phases are based on a one-acre site with a receptor distance of 25 meters (82 feet) in SCAQMD's SRA 1.

<sup>b</sup> The localized thresholds listed for NO<sub>x</sub> in this table takes into consideration the gradual conversion of NO<sub>x</sub> to NO<sub>2</sub>, and are provided in the mass rate look-up tables in the "Final Localized Significance Threshold Methodology" document prepared by the SCAQMD. As discussed previously, the analysis of localized air quality impacts associated with NO<sub>x</sub> emissions is focused on NO<sub>2</sub> levels as they are associated with adverse health effects.

See Appendix C for calculation sheets.

With regard to localized emissions from motor vehicle travel, traffic congested roadways and intersections have the potential to generate localized high levels of carbon monoxide (CO). The SCAQMD suggests conducting a CO hotspots analysis for any intersection where a project would worsen the Level of Service (LOS) from A-C to any level below C, and for any intersection rated D or worse where the project would increase the V/C ratio by two percent or more. Based on the Project's Transportation Study, the Project is not anticipated to have significant traffic impacts at any of the 5 study intersections. Thus, the Project would not have the potential to cause or contribute to an exceedance of the California one-hour or eighthour CO standards of 20 or 9.0 ppm, respectively; or generate an incremental increase equal to or greater than 1.0 ppm for the California one-hour CO standard, or 0.45 ppm for the eighthour CO standard at any local intersection. Therefore, impacts with respect to localized CO concentrations would be less than significant.

#### Toxic Air Contaminants (TAC)

As the Project consists of residential and commercial uses, the Project would not include any land uses that would involve the use, storage, or processing of carcinogenic or non-carcinogenic toxic air contaminants and no toxic airborne emissions would typically result from Project implementation. In addition, construction activities associated with the Project would be typical of other development projects in the City, and would be subject to the regulations and laws relating to toxic air pollutants at the regional, State, and federal level that would protect sensitive receptors from substantial concentrations of these emissions. In addition, construction activity would not result in long-term substantial sources of diesel particulate matter or other TAC emissions (i.e., 30 or 70 years) and would therefore not have the potential to generate significant health risks. Therefore, impacts associated with the release of toxic air contaminants would be less than significant.

# d) Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

**Less Than Significant Impact.** According to the SCAQMD *CEQA Air Quality Handbook*, land uses and industrial operations that are associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies and fiberglass molding. The Project involves the construction and operation of residential and commercial uses, which are not typically associated with odor complaints. Potential sources that may emit odors during construction activities include equipment exhaust. Odors from these sources would be localized and generally confined to the immediate area surrounding the Project. The Project would use typical construction techniques, and the odors would be typical of most construction sites and temporary in nature. As mentioned previously, the Project would be consistent with SCAQMD Rule 1113 – Architectural Coatings. As the Project involves no operational elements related to industrial projects, no long-term operational objectionable odors are anticipated. Therefore, potential impacts associated with objectionable odors would be less than significant.

### **Cumulative Impacts**

**Less Than Significant Impact.** Because the Basin is currently in non-attainment for O<sub>3</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>, the Project, in combination with the related projects, could exceed an air quality standard or contribute to an existing or projected air quality exceedance. With respect to determining the significance of the Project contribution, SCAQMD neither recommends quantified analyses of construction and/or operational emissions from multiple development projects nor provides methodologies or thresholds of significance to be used to assess the cumulative emissions generated by multiple cumulative projects. Instead, SCAQMD recommends that a project's potential contribution to cumulative impacts be assessed using the same significance criteria as those for project-specific impacts. Furthermore, SCAQMD states that, if an individual development project generates less than significant construction or operational emissions for those pollutants for which the Basin is in non-attainment.<sup>8</sup>

As discussed above, the mass daily construction and operational emissions generated by the Project would not exceed any of thresholds of significance recommended by SCAQMD. Also, localized emissions generated by the Project would not exceed SCAQMD's LSTs. Therefore, the Project would not contribute a cumulatively considerable increase in emissions for the pollutants which the Basin is in non-attainment. Cumulative air quality impacts would be less than significant and no mitigation measures are required.

## 4. **BIOLOGICAL RESOURCES**

The following analysis utilizes information provided in the *Los Lirios Apartments Arborist Report*, prepared by James Komen, December 16, 2019 (Tree Report); The Tree Report is available as Appendix A.

<sup>&</sup>lt;sup>8</sup> South Coast Air Quality Management District, White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution, Appendix A, August 2003.

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

**Less Than Significant.** The Project Site is located within a highly urbanized area and two of the Project Site's parcels are currently vacant. The other four Project parcels include the Metro Soto Station and Plaza. The City encompasses a variety of open space and natural areas that serve as habitat for sensitive species. Much of this natural open space is found in or is adjacent to the foothill regions of the San Gabriel, Santa Susana, Santa Monica, and Verdugo Mountains, the Simi Hills, and along the coastline between Malibu and the Palos Verdes Peninsula. Many of the outlying areas are contiguous with larger natural areas, and may be part of significant wildlife habitats or movement corridors. The central and valley portions of the City contain fewer natural areas.<sup>9</sup> The criteria identified in the L.A. CEQA Thresholds Guide (2006) is used where applicable and relevant to assist in analyzing the Appendix G threshold. According to Exhibit C-4 of the *L.A. CEQA Threshold Guide*, the Project Site and surrounding area are not identified as a biological resource area.<sup>10</sup> Moreover, the Project Site and immediately surrounding area are not within or near a designated Significant Ecological Area.<sup>11</sup>

The Project Site does not contain any habitat capable of sustaining any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. Additionally, there are no known locally designated natural communities at the Project Site or in the immediate vicinity, nor is the Project Site located immediately adjacent to undeveloped natural open space or a natural water source that may otherwise serve as habitat for State- or federally-listed species. As detailed in the Project's Tree Report, there are 29 trees on the Project Site, none of which are classified as a protected native species under the City of Los Angeles Ordinance No. 177,404. Of the 29 trees on the site, 19 trees would be removed for the construction of the Project. Moreover, there are no protected trees on neighboring properties that will be affected by the proposed construction. The existing trees on the Project Site would be removed for the Project.

The removal of vegetation and disturbances to the ground may result in take of nesting native birds on the Project Site. Migratory nongame native bird species are protected by international treaty under the Federal Migratory Bird Treaty (MBTA) of 1918 (50 C.F.R Section 10.13). Sections 3503, 3503.5 and 3513 of the California Fish and Game Code prohibit take of all birds and their active nests including raptors and other migratory nongame birds (as listed under the Federal MBTA). The Project Applicant would be required to adhere to the regulatory compliance measure below (RCM-BIO-1) to ensure that no significant impacts to nesting birds would occur due to the removal of the existing trees on the Project Site. Because existing regulations govern the protection of migratory birds, with adherence to RCM-BIO-1, the Project would have a less than significant impact on sensitive biological species or habitat.

#### Regulatory Compliance Measure

**RCM BIO-1** Proposed project activities (including disturbances to native and non-native vegetation, structures and substrates) should take place outside of the breeding bird season which

<sup>&</sup>lt;sup>9</sup> City of Los Angeles, L.A. CEQA Thresholds Guide, 2006, pages C-1 – C-2.

<sup>&</sup>lt;sup>10</sup> *Ibid, Exhibit C-2, Biological Resource Areas (Metro Geographical Area).* 

<sup>&</sup>lt;sup>11</sup> Los Angeles County Department of Regional Planning, Planning & Zoning Information, GIS-NET3 online database, website: http://planning.lacounty.gov/gisnet3, accessed: August 2019.

generally runs from March 1- August 31 (as early as February 1 for raptors) to avoid take (including disturbances which would cause abandonment of active nests containing eggs and/or young). Take means to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture of kill (Fish and Wildlife Code Section 86). If project activities cannot feasibly avoid the breeding bird season, beginning thirty days prior to the disturbance of suitable nesting habitat, the applicant shall:

- a) Arrange for weekly bird surveys to detect any protected native birds in the habitat to be removed and any other such habitat within properties adjacent to the Project Site, as access to adjacent areas allows. The surveys shall be conducted by a qualified biologist with experience in conducting breeding bird surveys. The surveys shall continue on a weekly basis with the last survey being conducted no more than 3 days prior to the initiation of clearance/construction work.
- b) If a protected native bird is found, the applicant shall delay all clearance/construction disturbance activities within 300 feet of suitable nesting habitat for the observed protected bird species until August 31.
- c) Alternatively, the Qualified Biologist could continue the surveys in order to locate any nests. If an active nest is located, clearing and construction within 300 feet of the nest or as determined by a qualified biological monitor, shall be postponed until the nest is vacated and juveniles have fledged and when there is no evidence of a second attempt at nesting. The buffer zone from the nest shall be established in the field with flagging and stakes. Construction personnel shall be instructed on the sensitivity of the area.
- d) The applicant shall record the results of the recommended protective measures described above to document compliance with applicable State and Federal laws pertaining to the protection of native birds. Such record shall be submitted and received into the case file for the associated discretionary action permitting the project.

# b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

**No Impact.** The Project Site is located within a highly urbanized area and two of the Project Site's parcels are currently vacant. The other four Project parcels include the Metro Soto Station and Plaza. No riparian or other sensitive habitat areas are located on or adjacent to the Project Site.<sup>12</sup> As discussed above, neither the Project Site nor adjacent areas are within a biological resource area or Significant Ecological Area. Implementation of the Project would not result in any adverse impacts to riparian habitat or other sensitive natural communities. Therefore, no impact would occur and no mitigation measures are required.

<sup>&</sup>lt;sup>12</sup> City of Los Angeles, L.A. CEQA Thresholds Guide, 2006, Exhibit C-4, Biological Resource Areas (Coastal and Southern Geographical Area); and U.S. Fish and Wildlife Service, National Wetlands Inventory, Wetlands Mapper, website: http://www.fws.gov/wetlands/Data/Mapper.html, accessed: August 2019.

# c) Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

**No Impact.** The Project Site is located within a highly urbanized area and two of the Project Site's parcels are currently vacant. The other four Project parcels include the Metro Soto Station and Plaza. Review of the National Wetlands Inventory identified no protected wetlands in the vicinity of the Project Site.<sup>13</sup> Further, as the Project Site contains urban uses, the Project Site does not support any riparian or wetland habitat, as defined by Section 404 of the Clean Water Act. Therefore, no impacts to riparian or wetland habitats would occur with implementation of the Project and no mitigation measures are required.

# d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

**No Impact.** Due to the developed condition and location of the Project Site, there are no wildlife corridors or native wildlife nursery sites in the Project vicinity. Therefore, the Project would not interfere with the movement of any resident or migratory fish or wildlife species. No impacts would occur with the movement of any native resident or migratory fish or wildlife species and no mitigation measures are required.

# e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

**No Impact.** As set forth in Ordinance No. 177,404, any of the following Southern California native tree species, which measures four inches or more in cumulative diameter, four and one-half feet above the ground level at the base of the tree is a protected tree:

- Oak tree including Valley Oak (*Quercus lobata*), California Live Oak (*Quercus agrifolia*), or any other tree of the oak genus indigenous to California but excluding the Scrub Oak (*Quercus dumosa*);
- Southern California Black Walnut (Juglans californica var. californica);
- Western Sycamore (Platanus racemose); and
- California Bay (Umbellularia californica).

As detailed in the Project's Tree Report, there are 29 trees on the Project Site, none of which are classified as a protected native species. Of the 29 trees on site, 19 trees would be removed for the construction of the Project. Moreover, there are no protected trees on neighboring properties that would be affected by the proposed construction. The Project Site is located within a highly urbanized area and two of the Project Site's parcels currently vacant. The other four Project parcels include the Metro Soto Station and Plaza.. Therefore, the Project would not conflict with local policies or ordinances protecting biological resources and there would be no impact.

<sup>&</sup>lt;sup>13</sup> Ibid.

### f) Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

**No Impact.** As discussed above, neither the Project Site nor adjacent areas are within a biological resource area or Significant Ecological Area. Additionally, there is no adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan in place that includes the Project Site.<sup>14,15,16</sup> Therefore, no impact would occur and no mitigation measures are required.

### **Cumulative Impacts**

**Less Than Significant**. Similar to the Project, the majority of the related projects occurring in the Project Site area would occur on previously disturbed, urbanized land. As discussed above, the Project Site does not contain sensitive biological resources or habitat, including wetlands, and is not part of a wildlife corridor and therefore could not contribute to a cumulative effect in these regards. The Project would fully comply with City ordinances and regulatory compliance measures (RCM-BIO-1). Related projects would also be required to comply with the City's tree requirements and to adhere to the MBTA and Fish and Wildlife code provisions. Therefore, cumulative biological resource impacts would be less than significant.

## 5. CULTURAL RESOURCES

The following analysis utilizes information provided in the *Record Search Results for the Proposed Los Lirios Mixed-Use Project*, prepared by the South Central Coastal Information Center, June 26, 2019 (Historic Records Search). The Historic Records Search is available as Appendix B.

# a) Would the project Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?

**No Impact.** The Project Site is located within a highly urbanized area and two of the Project Site's parcels are currently vacant. The other four Project parcels include the Metro Soto Station and Plaza. As such, the Project would not involve the demolition of any existing structures. The Project Site does not require historic preservation review and is not within a historic preservation overlay zone;<sup>17</sup> nor is the Project Site identified as a City Historic-Cultural Monument (HCM) and is not listed or eligible to be listed in the State or National registers.<sup>18</sup> Moreover, the HistoricPlacesLA resource inventory indicates no historic uses

<sup>&</sup>lt;sup>14</sup> California Regional Conservation Plan, August 2015, website: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=68626&inline, accessed: August 2019.

<sup>&</sup>lt;sup>15</sup> Habitat Conservation Plans – Region 8, website: http://ecos.fws.gov/ecp0/conservationPlan/region/summary?region=8&type=HCP, accessed: August 2019.

<sup>&</sup>lt;sup>16</sup> Habitat Conservation Plan Documents, website: https://www.fws.gov/carlsbad/hcps/HCP\_Docs.html, accessed: August 2019.

<sup>&</sup>lt;sup>17</sup> City of Los Angeles Department of City Planning Zone Information & Map Access System, website: http://zimas.lacity.org, accessed: August 2019.

<sup>&</sup>lt;sup>18</sup> City of Los Angeles Department of City Planning, LA Historic-Cultural Monuments, May 2015, website: http://planning.lacity.org/mapgallery/image/citywide/LA\_HCM.pdf, accessed: August 2019.

within or adjacent to the Project Site.<sup>19</sup> The closest historic resources to the Project Site are two single family residences (118 S. Soto Street and 124 S. Soto Street) located 85 feet east of the Project Site across S. Soto Street which are both designated as HPO2 (historical single family property) under the California Office of Historic Preservation (COHP). In addition, the Peabody House, located approximately 100 feet to the east of the Site is identified on SurveyLA but is not designated as a historic resource<sup>20</sup> There are no historical resources on the Project Site and no historical resources would be demolished, altered, or relocated as a result of the Project. As such, the Project would have no direct impacts to historical resources.

## b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

**Less Than Significant Impact.** The Project Site and immediately surrounding area do not contain any known archaeological sites or archaeological survey areas.<sup>21</sup> Additionally, the Project Site is located within a highly urbanized area and four of the Project Site's parcels are currently vacant. The other two Project parcels include the Metro Soto Station and Plaza. Any archaeological resources that may have existed near the site surface are likely to have been disturbed or previously removed. However, the Project would likely result in deeper excavations than previously performed on the site, including excavation to depths up to 11 feet below grade to construct the subterranean parking structure. As such, previously unknown archaeological resources may exist beneath the Project Site that could be uncovered during excavation activities. While the uncovering of archaeological resources is not anticipated, the following regulatory compliance measure is required to ensure that any potential impact to a previously unknown archaeological resource is reduced to a less than significant level. Therefore, with required adherence to the regulatory compliance measure (RCM CUL-1), the Project's impacts on archaeological resources would be less than significant.

### Regulatory Compliance Measure

**RCM CUL-1** If any archaeological materials are encountered during excavation, grading, or construction activities, work shall cease in the area of the find and a qualified archaeologist shall be secured by contacting the South Central Coastal Information Center located at California State University, Fullerton, or a member of the Society of Professional Archaeologists (SOPA) or a SOPA-qualified archaeologist, who shall determine the significance of the resource(s) as defined in Section 15064.5 of the State CEQA Guidelines. The archaeologist shall prepare a survey, study, or report evaluating the impact. Said survey, study, or report shall contain appropriate measure(s), as necessary, for the preservation, conservation, or relocation of the resource, and the Project Applicant shall comply with the measure(s).

<sup>&</sup>lt;sup>19</sup> City of Los Angeles Department of City Planning, Office of Historic Resources, Historic Places LA online map, website: http://www.historicplacesla.org/map, accessed: August 2019.

<sup>&</sup>lt;sup>20</sup> Ibid.

<sup>&</sup>lt;sup>21</sup> City of Los Angeles, Citywide General Plan Framework Final Environmental Impact Report, certified August 2001, Figure CR-1, Prehistoric and Historic Archaeological Sites and Survey Areas in the City of Los Angeles.

# c) Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

**Less Than Significant Impact.** The Project Site is located within a highly urbanized area and two of the Project Site's parcels are currently vacant. The other four Project parcels include the Metro Soto Station and Plaza. Although the Project Site has been subject to grading and development in the past, the Project would require excavations at a depth of approximately 11 feet below ground surface. As a result, construction may disturb human remains, including those interred outside of dedicated cemeteries.

Although the possibility of encountering human remains is low, due to extensive previous development on the Site, construction and ground disturbing activity of the Project could potentially disturb previously unknown human remains. California PRC Section 5097.98, as amended by Assembly Bill 2641, protects cultural resources and provides procedures in the event human remains of Native American origin are discovered during Project implementation and land owners are required to address the Project's potential impacts to human remains. PRC Section 5097.98 requires notification of the County Coroner in the event of the unanticipated discovery of human remains and a prescribes protocol for their disposition in accordance with applicable regulations, notification of the NAHC and subsequent tribal coordination if remains are determined to be of Native American descent. Therefore, compliance with existing regulation (see below for regulatory compliance measure), the Project's impacts on disturbing human remains would be less than significant.

### Regulatory Compliance Measure

- **RCM CUL-2** If human remains are encountered unexpectedly during excavation, grading, or construction activities, State Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to California Public Resources Code Section 5097.98. In the event that human remains are discovered during said activities, the following procedure shall be observed:
  - a) Stop immediately and contact the Los Angeles County Coroner:

1104 N. Mission RoadLos Angeles, CA 90033(323) 343-0512 (8 a.m. to 5 p.m. Monday through Friday) or(323) 343-0714 (After Hours, Saturday, Sunday, and Holidays)

If the remains are determined to be of Native American descent, the County Coroner has 24 hours to notify the Native American Heritage Commission (NAHC). In such case:

- b) The NAHC will immediately notify the person it believes to be the Most Likely Descendent (MLD) of the deceased Native American.
- c) The MLD has 48 hours to make recommendations to the owner, or representative, for the treatment or disposition, with proper dignity, of the human remains and grave goods.
- d) If the owner does not accept the descendant's recommendations, the owner or the descendent may request mediation by the NAHC.

### **Cumulative Impacts**

Less Than Significant Impact. Impacts related to cultural resources are site-specific and as such, are assessed on a site-by-site basis.

Cumulative impacts would occur if the Project and related projects were to have combined significant adverse effects on historical resources of the same type in the immediate vicinity, or if they were to contribute to changes within a historic district; however, there are no historical resources on the Project Site. The related projects are isolated by intervening development and located in a number of locations of varying character and context. As discussed above, the Project would not result in direct or indirect impacts to historical resources, and, as such, the Project's effects would not be cumulatively considerable, and cumulative impacts would be less than significant.

Many of the related projects would require excavation that could potentially expose or damage potential archaeological resources or disturb human remains. However, the related projects are located in developed urban areas with sites that have been previously disturbed, and the potential to encounter and cause a significant impact on surface resources is unlikely. Further, in association with CEQA review, and depending on the depth of excavation and sensitivity of respective sites, compliance with regulatory measures for the protection of human remains, would be identified for those related projects that have the potential to cause significant impacts to undiscovered archaeological resources or to disturb human remains.

### 6. ENERGY

a) Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during project construction or operation?

**Less Than Significant Impact.** The Project would be designed and operated in accordance with the applicable State Building Code Title 24 regulations and City of Los Angeles Green Building Code, which impose energy conservation measures.

During Project construction, energy would be consumed in the form of electricity associated with electricpowered cranes and welders, the conveyance of water used for dust control and, on a limited basis, powering lights, electronic equipment, or other construction activities necessitating electrical power. LADWP provides electrical service to the City, including the Project Site. In April 2018, LADWP adopted the *2017 Power Strategic Long-Term Resource Plan* (SLTRP), which provides a 20-year roadmap to guide LADWP in its efforts to supply reliable electricity in an environmentally responsible and cost effective manner. The 2017 SLTRP re-examines and expands its analysis on the *2016 Final Power Integrated Resource Plan* (IRP) resource cases with updates in line with latest regulatory framework, and updates to case scenario assumptions that include a 65 percent Renewable Portfolio Standard (RPS), advanced energy efficiency, and higher levels of local solar, energy storage, and transportation electrification.<sup>22</sup> LADWP generates power from a variety of different sources that include renewable energy, hydroelectric, natural gas, nuclear energy, and other fuels. LADWP utilizes renewable energy sources and is committed to meeting the requirement of the RPS Enforcement Program to use at least 50 percent of the State's

<sup>&</sup>lt;sup>22</sup> Los Angeles Department of Water and Power, Power, 2017 Power Strategic Long-Term Resource Plan, December 2017, website: https://www.ladwp.com/ladwp/faces/wcnav\_externalId/a-p-doc?\_adf.ctrlstate=enux7i582\_29&\_afrLoop=2307285007464363, accessed: August 2019.

energy from renewables by 2030.<sup>23</sup> Current installed generation capacity is over 7,880 megawatts of power.<sup>24</sup> As such, LADWP would be able to support electricity consumption during construction of the Project. Moreover, electricity consumption during construction of the Project would be temporary and similar other development Projects in the City.

Electricity consumption during operation of the Project would occur due to the residential, commercial, and parking uses. Table VI-6, Estimated Project Electricity Consumption, presents the electricity the Project is expected to consume. It should be noted that CalEEMod, which is based on the 2016 Title 24 standards, was utilized to calculate the electricity consumption on the following table.

Land Use	Electricity Consumption (kWh/year)
Residential <sup>a</sup>	394,141
Retail	144,100
Project Total:	538,241
Note: kWh = kilowatt hours	
<sup>a</sup> Includes parking areas.	
See Appendix E for calculation sheets	S

Table VI-6
Estimated Project Electricity Consumption

According to LADWP, electric service is available and will be provided to the Project Site in accordance with LADWP regulations and the Project is part of the total growth load forecast for the City and has been taken into account in the planned growth of the power system.<sup>25</sup> Moreover, LADWP estimates the residential sector will consume approximately 8.0 billion kilowatt hours (kWh) in 2021 (Project build-out year) and the commercial sector will consume approximately 12.1 billion kWh in 2021.<sup>26</sup> The Project would have an electricity demand of approximately 394,141 kWh per year for the residential uses, which represents 0.005 percent of the anticipated residential sector demand in 2021. Additionally, the Project would have an electricity demand of approximately 144,100 kWh per year for the commercial uses, which represents approximately 0.001 percent of the anticipated commercial sector demand in 2021.

Southern California Gas Company (SCG) provides natural gas service to the City, including the Project Site. The 2018 California Gas Report presents a comprehensive outlook for natural gas requirements and supplies for California through 2035. SCG projects total gas demand to decline at an annual rate of 0.74 percent from 2018 to 2035. The decline in throughput demand is due to modest economic growth, CPUCmandated energy efficiency (EE) standards and programs, tighter standards created by revised Title 24 Codes and Standards, renewable electricity goals, the decline in commercial and industrial demand, and

<sup>&</sup>lt;sup>23</sup> California Environmental Protection Agency, Air Resources Board, Renewable Portfolio Standard, website: http://www.arb.ca.gov/energy/rps.htm, accessed: August 2019.

<sup>&</sup>lt;sup>24</sup> Los Angeles Department of Water and Power, Power, Facts & Figures, website: https://www.ladwp.com/ladwp/faces/ladwp/aboutus/a-power/a-p-factandfigures?\_adf.ctrlstate=enux7i582\_50&\_afrLoop=2308156176706556, accessed: August 2019.

<sup>&</sup>lt;sup>25</sup> Letter correspondence from Jeffrey T. Bergman, District Engineer, Metro East Service Planning, July 2, 2019. (Appendix H)

<sup>&</sup>lt;sup>26</sup> Los Angeles Department of Water and Power, Power, 2017 Power Strategic Long-Term Resource Plan, December 2017, website: https://www.ladwp.com/ladwp/faces/wcnav\_externalId/a-p-doc?\_adf.ctrlstate=enux7i582\_29&\_afrLoop=2307285007464363, accessed: August 2019.

conservation savings linked to Advanced Metering Infrastructure (AMI). From 2018 to 2035, SCG expects residential demand to decline from 236 Billion Cubic Feet (Bcf) to 186 Bcf. SCG expects the non-residential markets to decline at an average annual rate of 0.28 percent or from 117 Bcf in 2018 to 112 Bcf by 2035. SCG annual gas supply is expected to be approximately 1,378 Bcf each year from 2023 until at least 2035.<sup>27</sup>

Natural gas to the Project Site would be provided by existing SCG facilities in the Project vicinity. Table VI-7, Estimated Project Natural Gas Consumption, presents the amount of natural gas the Project is expected to consume. It should be noted that CalEEMod 2016.3.2, which is based on the 2016 Title 24 standards, was utilized to calculate the natural gas consumption on the following table.

Land Use	Natural Gas Consumption (kBTU/year)			
Residential	724,560			
Retail	581,000			
Project Total:	1,305,560			
Note: kBTU = Thousand British Thermal Units				
See Appendix E for calculation sheets. Assumes all natural gas hearths.				

Table VI-7	
Estimated Project Natural Gas Consumption	

As shown above, the Project's natural gas consumption would represent an extremely small percentage of SCG's total usage supplied to residential and commercial buildings. Upon supply availability, SCG will provide gas service to the Project in accordance with the rules and regulations in effect at the time service is provided.<sup>28</sup> SCG is satisfactorily meeting its obligations to its current customers and projects to meet obligations of its future customers. As such, SCG's existing infrastructure and storage supplies are well-prepared for the long-term forecasts. However, in the event SCG cannot provide service from the existing infrastructure, a system analysis would be conducted by SCG to determine the best method to provide service and appropriate actions such as pressure betterments may be initiated to resolve the issue. Thus, any corrective action, albeit unlikely, would be minimal and temporary, and would not result in any adverse environmental impacts. Because implementation of the Project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during project construction or operation, this impact would be less than significant.

# b) Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

**Less Than Significant Impact.** As stated above, the Project would be designed and operated in accordance with the with applicable State Building Code Title 24 regulations and City of Los Angeles Green Building Code, which impose energy conservation measures. As such, the Project would not conflict with or

<sup>&</sup>lt;sup>27</sup> California Gas and Electric Utilities, 2018 California Gas Report, website: https://www.socalgas.com/regulatory/documents/cgr/2018\_California\_Gas\_Report.pdf, accessed: August 2019.

<sup>&</sup>lt;sup>28</sup> Letter correspondence from Oscar Mariscal, Pipeline Planning Assistant, SoCalGas-Compton HQ, July 16, 2019. (Appendix H)

obstruct a state or local plan for renewable energy or energy efficiency. Therefore, Project impacts would be less than significant, and no mitigation is required.

### **Cumulative Impacts**

Less Than Significant Impact. Cumulative impacts occur when impacts that are significant or less than significant from a proposed project combine with similar impacts from other past, present, or reasonably foreseeable projects in a similar geographic area. There are 31 related projects located within the vicinity of the Project Site. The geographic context for the cumulative impacts analysis regarding electricity is LADWP's service area and the geographic context for the cumulative impacts analysis regarding natural gas is SCG service area. The City has determined to assess the Project's potential cumulative impacts in the context of County-wide consumption. Growth within these geographic areas is anticipated to increase the demand for energy, as well as the need for energy infrastructure, such as new or expanded energy facilities. The Project's contribution to cumulative impacts related to energy consumption would not result in a cumulatively considerable effect related to the wasteful, inefficient, and unnecessary consumption of energy during construction or operation. As such, the Project's impacts would not be cumulatively considerable; therefore, cumulative energy impacts are concluded to be less than significant.

## 7. GEOLOGY AND SOILS

The following analysis utilizes information provided in the *Preliminary Geotechnical Investigation*, prepared by Geocon West Inc., April 16, 2018 (Geotechnical Investigation). The Geotechnical Investigation is available as Appendix F.

- a) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:
  - (i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

**Less Than Significant Impact.** The numerous faults in Southern California include active, potentially active, and inactive faults. The criteria for these major groups are based on criteria developed by the California Geological Survey (CGS, formerly known as CDMG) for the Alquist-Priolo Earthquake Fault Zone Program. By definition, an active fault is one that has had surface displacement within Holocene time (about the last 11,000 years). A potentially active fault has demonstrated surface displacement during Quaternary time (approximately the last 1.6 million years), but has had no known Holocene movement. Faults that have not moved in the last 1.6 million years are considered inactive.

The Project Site is not within a state-designated Alquist-Priolo Earthquake Fault Zone or a city-designated Preliminary Fault Rupture Study Area for surface fault rupture hazards. No active or potentially active faults with the potential for surface fault rupture are known to pass directly beneath the Project Site. Therefore, the potential for surface rupture due to faulting occurring beneath the Project Site during the design life of the proposed development is considered low. However, the Project Site is located in the seismically active Southern California region, and could be subjected to moderate to strong ground shaking in the event of an earthquake on one of the many active Southern California faults.

The closest surface trace of an active fault to the Project Site is the Raymond Fault located approximately 5.3 miles to the north. Other nearby active faults are the Hollywood Fault, the Eagle Rock Fault, the

Verdugo Fault, the Newport-Inglewood Fault Zone, and the Whittier Fault located approximately 5.7 miles north, 6.8 miles northeast, 7.4 miles north-northeast, 8.6 miles southwest, and 9.3 miles east-southeast of the site, respectively. The active San Andreas Fault Zone is located approximately 32 miles northeast of the Project Site.

Several buried thrust faults, commonly referred to as blind thrusts, underlie the Los Angeles Basin at depth. These faults are not exposed at the ground surface and are typically identified at depths greater than 3.0 kilometers. The October 1, 1987 M<sub>w</sub> 5.9 Whittier Narrows earthquake and the January 17, 1994 M<sub>w</sub> 6.7 Northridge earthquake were a result of movement on the Puente Hills Blind Thrust and the Northridge Thrust, respectively. The Puente Hills Blind Thrust and the Elysian Park Thrust underlie the Project Site at depth. These deep thrust faults and others in the Los Angeles area are not exposed at the surface and do not present a potential surface fault rupture hazard at the site; however, these deep thrust faults are considered active features capable of generating future earthquakes that could result in moderate to significant ground shaking at the site. The Geotechnical Investigation found no active faults traversing the Project Site. Moreover the Project would be required to implement 2016 California Building Code (2016 CBC) standards which include seismic design criteria, therefore the Project Site is not exposed to the hazard of surface fault rupture. Therefore, impacts would be less than significant and no mitigation measures are required.

### (ii) Strong seismic ground shaking?

Less Than Significant Impact. The Project Site could be subjected to strong ground shaking in the event of an earthquake. However, this hazard is common in Southern California and the effects of ground shaking can be reduced if the proposed structures are designed and constructed in conformance with current building codes and engineering practices. Accordingly, through adherence to the 2016 CBC, the Project is required to incorporate the recommendation of the Geotechnical Investigation and the conditions of approval provided by LADBS, which takes into account seismic calculations from probabilistic seismic hazard modeling for the Project Site. The 2016 CBC, as amended by the City's Building Code, incorporates the latest seismic design standards for structural loads and materials to provide for the latest in earthquake safety. Compliance with requirements would reduce seismic ground shaking impacts to the maximum extent practicable under current engineering practices. The Project would not contain uses or activities that would exacerbate the risks from existing environmental conditions. The Geotechnical Investigation's recommendations pertain to earthwork, foundation support, retaining walls, temporary excavations, floor slabs, exterior flatwork and auxiliary structures, concrete, soil corrosivity, pavement design, drainage, plan review, agency review, supplemental consulting, and project safety. The conditions of approval provided by LADBS pertain to, among others, conditions for use of fill and shoring, foundations, seismic design, and retaining walls (see Appendix F). Therefore, as the Project would be required to comply with the 2016 CBC, the recommendations in the Geotechnical Investigation, and the conditions of approval provided by LADBS, impacts would be less than significant.

### (iii) Seismic-related ground failure, including liquefaction?

Less Than Significant Impact. Liquefaction is a phenomenon in which loose, saturated, relatively cohesionless soil deposits lose shear strength during strong ground motions. Primary factors controlling liquefaction include intensity and duration of ground motion, gradation characteristics of the subsurface soils, in-situ stress conditions, and the depth to groundwater. Liquefaction is typified by a loss of shear strength in the liquefied layers due to rapid increases in pore water pressure generated by earthquake accelerations. Liquefaction typically occurs in areas where the soils below the water table are composed of poorly consolidated, fine to medium-grained, primarily sandy soil. In addition to the requisite soil

conditions, the ground acceleration and duration of the earthquake must also be of a sufficient level to induce liquefaction.

The State of California Seismic Hazard Zone Map for the Los Angeles Quadrangle indicates that the Project Site is not located in an area designated as having a potential for liquefaction. In addition, a review of the County of Los Angeles Seismic Safety Element indicates that the Project Site is not located within an area identified as having a potential for liquefaction. Based on these considerations, the potential for liquefaction and associated ground deformations beneath the Project Site is very low. Therefore, impacts associated with liquefaction would be less than significant.

### (iv) Landslides?

**Less Than Significant Impact.** The topography at the Project Site and in the Project Site vicinity slopes gently to the north. The Project Site is located within a City of Los Angeles Hillside Grading Area but is not located within a City of Los Angeles Hillside Ordinance Area. According to the County of Los Angeles Safety Element, the Project Site is not located within a "hillside area" or an area identified as having a potential for slope instability or landslides. Additionally, the Project Site is not within a zone of required investigation for earthquake-induced landslides. There are no known landslides near the Project Site, nor is the Project Site in the path of any known or potential landslides. Therefore, the potential for landslides to adversely affect the Project Site in the current condition is considered low. Therefore, impacts associated with landslides would be less than significant.

### b) Would the project result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact. The majority of the area surrounding the Project Site is completely developed and would not be susceptible to indirect erosional processes (e.g., uncontrolled runoff) caused by the Project. The Project Site is located within a highly urbanized area and two of the Project Site's parcels are currently vacant. The other four Project parcels include the Metro Soto Station and Plaza. Project-related grading, excavation, and construction would expose soil on site, for a limited time, resulting in possible erosion. Excavation activities would be necessary to accommodate the Project, which would include one level of subterranean parking. Although there is a potential to expose soil to erosion, construction activities would be performed in accordance with the requirements of the 2016 CBC and the Los Angeles Regional Water Quality Control Board (LARWQCB) through the City's Stormwater Management Division. Additionally, the Project would be required to develop a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP would require implementation of an erosion control plan to reduce the potential for wind or waterborne erosion during the construction process. The potential to expose soil to erosion would be further reduced through implementation of stringent controls imposed by grading and building regulations, such as the conditions of approval provided by LADBS for the Project's Geotechnical Investigation and CBC compliance (see Appendix F). All grading activities would require permits from LADBS, which would include requirements to limit the potential impacts associated with erosion. In addition, on-site grading and site preparation must comply with all applicable provisions in Chapter IX, Division 70 of the LAMC, which addresses grading, excavation, and fills.

Long-term operation of the Project would not result in substantial soil erosion or loss of topsoil as the majority of the Project Site would be covered by the proposed building and paving while the remaining portions of the Project Site would be covered with irrigated landscaping. No exposed areas subject to erosion would be created or affected by the Project as pad and roof drainage would be collected and transferred to the street or approved location in non-erosive drainage devices. Therefore, with implementation of the applicable grading and building requirements, impacts associated with soil erosion or loss of topsoil would be less than significant and no mitigation measures are required.

c) Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

**Less Than Significant Impact.** Potential impacts with respect to liquefaction and landslide potential are evaluated above.

Subsidence occurs when a large portion of land is displaced vertically, usually due to the withdrawal of groundwater, oil, or natural gas. Soils that are particularly subject to subsidence include those with high silt or clay content. The Project Site is not located within an area of known ground subsidence. No large-scale extraction of groundwater, gas, oil, or geothermal energy is occurring or planned at the Project Site or in the general Project Site vicinity. There appears to be little or no potential for ground subsidence due to withdrawal of fluids or gases at the site. Therefore, impacts related to subsidence would be less than significant and no mitigation measures are required.

## d) Would the project be located on expansive soil, as identified in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

**Less Than Significant Impact.** The existing site soils encountered at the proposed foundation elevation during the Geotechnical Investigation are considered to have a "low" expansive potential; and are classified as "expansive" based on the 2016 CBC Section 1803.5.3. As stated previously, the Project would be required to comply with the 2016 CBC, the recommendations in the Geotechnical Investigation, and the conditions of approval provided by LADBS. The recommendations presented within the Geotechnical Report assume that the building foundations and slabs will derive support in the existing soil at the Project Site. Therefore, potential impacts from expansive soil would be less than significant and no mitigation measures are required.

# e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of wastewater?

**No Impact.** The Project Site is located in a developed area of the City, which is served by a wastewater collection, conveyance, and treatment system operated by the City. The Project would connect to the existing City's sewer system, and septic tanks or alternative disposal systems are neither necessary nor are they proposed. The Project will connect to the City's sewer system. Therefore, no impact would occur and no mitigation measures are required.

# e) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

**Less Than Significant Impact.** The Project Site does not contain any unique geological features. Moreover, there are no known paleontological resources within the Project Site,<sup>29</sup> and the Project Site and surroundings are not within an area identified as older surface sediments where fossils are likely to be found.<sup>30</sup> However, the Project would require additional ground disturbance that may involve deeper

<sup>&</sup>lt;sup>29</sup> City of Los Angeles, Citywide General Plan Framework Final Environmental Impact Report, certified August 2001, Section 2.15, Figure CR-2, Vertebrate Paleontological Resources in the City of Los Angeles.

<sup>&</sup>lt;sup>30</sup> City of Los Angeles, Citywide General Plan Framework Final Environmental Impact Report, certified August 2001, Section 2.15, Figure CR-3, Invertebrate Paleontological Resource Sensitivity Areas in the City of Los Angeles.
excavation than previously performed at the Site, including excavation to depths up to 11 feet below grade to construct the subterranean parking structure, into native soils that may contain paleontological resources. As such, previously unknown paleontological resources may exist beneath the Project Site that could be uncovered during excavation activities. While the uncovering of paleontological resources is not anticipated, the following regulatory compliance measure would ensure that any potential impact to a previously unknown paleontological resource is reduced to a less than significant level. Therefore, with mandatory compliance with RCM GEO-1, the Project's impacts on paleontological resources would be less than significant, and no mitigation measures are required.

# Regulatory Compliance Measure

**RCM GEO-1** If any paleontological materials are encountered during excavation, grading, or construction activities, work shall cease in the area of the find and a qualified paleontologist shall be secured by contacting either the Center for Public Paleontology USC, UCLA, California State University Los Angeles, California State University Long Beach, or the Los Angeles County Natural History Museum, who shall determine the significant of the resource(s). The paleontologist shall prepare a survey, study, or report evaluating the impact. Said survey, study, or report shall contain appropriate measure(s), as necessary, for the preservation, conservation, or relocation of the resource, and the Project Applicant shall comply with the measure(s). Project construction activities may resume in the area of the find once copies of the paleontological survey, study, or report are submitted to the Los Angeles County Natural History Museum.

# **Cumulative Impacts**

**Less Than Significant Impact.** Impacts associated with geologic and soil issues are typically confined to individual project sites or within a very localized area because of site-specific conditions. Related projects would be subject to established guidelines and building code regulations and construction procedures pertaining to seismic hazards. The Los Angeles Building Code would require consideration of seismic design for all related projects. Related projects would be required to implement LAMC regulations for grading and excavations during construction, including SWPPP and LID requirements. In addition, the related project sites are located in a highly urbanized area and would connect to existing wastewater infrastructure. Thus, the related projects would not need to use septic tanks or alternative waste disposal systems.

The Project Site is not located within a State-designated hazard zone for earthquake induced liquefaction or landslides. The Project and related projects would be required to comply with guidelines and building code regulations pertaining to seismic hazards and with approved geotechnical recommendations, risks associated with seismic rupture, lateral spreading, subsidence, liquefaction, or collapse would also be less than significant. The Project and related projects would comply with LAMC Regulations related to excavation and grading and would not require the need for septic tanks or alternative waste disposal systems.

Many of the related projects would require excavation that could potentially expose or damage potential paleontological resources. However, the related projects are located in developed urban areas with sites that have been previously disturbed, and the potential to encounter and cause a significant impact on surface resources is unlikely. Further, in association with CEQA review, and depending on the depth of excavation and sensitivity of respective sites, mitigation measures would be identified for those related projects that have the potential to cause significant impacts to undiscovered paleontological resources.

Implementation of such mitigation measures for the related projects would avoid significant impacts paleontological resources and human remains.

As discussed previously, the identified RCM GEO-1, would ensure the Project would not cause a significant impact on a unique paleontological resource. Thus, the Project's contribution to cumulative impacts would not be cumulatively considerable.

# 8. GREENHOUSE GAS EMISSIONS

# a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

**Less Than Significant Impact.** Gases that trap heat in the atmosphere are called greenhouse gases (GHGs), since they have effects that are analogous to the way in which a greenhouse retains heat. Greenhouse gases are emitted by both natural processes and human activities. The accumulation of greenhouse gases in the atmosphere regulates the earth's temperature. The State of California has undertaken initiatives designed to address the effects of greenhouse gas emissions, and to establish targets and emission reduction strategies for greenhouse gas emissions in California. Activities associated with the Project, including construction and operational activities, would have the potential to generate greenhouse gas emissions.

The principal GHGs are carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), sulfur hexafluoride (SF<sub>6</sub>), perfluorocarbons (PFCs), hydrofluorocarbons (HFCs), and water vapor (H<sub>2</sub>O). CO<sub>2</sub> is the reference gas for climate change because it is the predominant greenhouse gas emitted. To account for the varying warming potential of different GHGs, GHG emissions are often quantified and reported as CO<sub>2</sub> equivalents (CO<sub>2</sub>e).

California has enacted several pieces of legislation that relate to GHG emissions and climate change, much of which sets aggressive goals for GHG reductions within the state. Per Senate Bill 97, the California Natural Resources Agency adopted amendments to the CEQA Guidelines, which address the specific obligations of public agencies when analyzing GHG emissions under CEQA to determine a project's effects on the environment. However, neither a threshold of significance nor any specific mitigation measures are included or provided in these CEQA Guideline amendments.

### Assembly Bill 32 and Senate Bill 32 (Statewide GHG Reductions)

The California Global Warming Solutions Act of 2006, widely known as AB 32, requires the California Air Resources Board (CARB) to develop and enforce regulations for the reporting and verification of statewide GHG emissions. CARB is directed to set a statewide GHG emission limit, based on 1990 levels, to be achieved by 2020. The bill set a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner. The heart of the bill is the requirement that statewide GHG emissions be reduced to 1990 levels by 2020.

The CARB AB 32 Scoping Plan (Scoping Plan) contains the main strategies to achieve the 2020 emissions cap. The Scoping Plan was developed by CARB with input from the Climate Action Team (CAT) and proposes a comprehensive set of actions designed to reduce overall carbon emissions in California, improve the environment, reduce oil dependency, diversify energy sources, and enhance public health while creating new jobs and improving the State economy. The GHG reduction strategies contained in the Scoping Plan include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, and market-based mechanisms such as a cap-and-trade system.

CARB has adopted the First Update to the Climate Change Scoping Plan.<sup>31</sup> This update identifies the next steps for California's leadership on climate change. The first update to the initial AB 32 Scoping Plan describes progress made to meet the near-term objectives of AB 32 and defines California's climate change priorities and activities for the next several years. It also frames activities and issues facing the State as it develops an integrated framework for achieving both air quality and climate goals in California beyond 2020.

In the original Scoping Plan, CARB approved a total statewide GHG 1990 emissions level and 2020 emissions limit of 427 million metric tons of CO<sub>2</sub>e. As part of the update, CARB revised the 2020 Statewide limit to 431 million metric tons of CO<sub>2</sub>e, an approximately 1 percent increase from the original estimate. The 2020 business-as-usual (BAU) forecast in the update is 509 million metric tons of CO<sub>2</sub>e. The State would need to reduce those emissions by 15.3 percent to meet the 431 million metric tons of CO<sub>2</sub>e 2020 limit.

CARB also aims to reduce GHG emissions significantly by 2030. As California moves closer to reaching the 2020 GHG emission reduction goal state legislation has focused on furthering GHG emission reduction targets. Executive Order B-30-15 was issued April 2015 and establishes a mid-term GHG reduction target for California of 40 percent below 1990 levels by 2030. In 2016, the Legislature passed SB 32 with the companion bill AB 197 which further mandates the 2030 target and provides additional direction to CARB on strategies to reduce GHG emissions. In response to Executive Order B-30-15 and SB 32 CARB has released California's 2017 Climate Change Scoping Plan.<sup>32</sup> The plan shows California is on track to exceed its 2020 climate target, and establishes a path that will lead California to its 2030 climate goal. Per SB 32, the 2030 limit is 260 MMTCO<sub>2</sub>e a year. However, known commitments are expected to result in emissions that are 60 MMTCO<sub>2</sub>e above the target in 2030, and have a cumulative emissions reduction gap of about 236 MMTCO<sub>2</sub>e. This means the known commitments do not decline fast enough to achieve the 2030 target. The remaining 236 MMTCO<sub>2</sub>e of estimated GHG emissions reductions would not be achieved unless further action is taken to reduce GHGs. However, while there is a potential GHG emissions reduction gap of approximately 236 MMTCO<sub>2</sub>e, the following paragraphs note that the California legislature passed AB 398 to extend the cap-and-trade program from January 1, 2021 through December 31, 2030 in order to achieve the necessary GHG reductions associated with SB 32.

# Cap-and-Trade Program

As mentioned above, the Scoping Plan identifies a cap-and-trade program as one of the strategies the State will employ to reduce GHG emissions that cause climate change. The cap-and-trade program is implemented by CARB and "caps" GHG emissions from the industrial, utility, and transportation fuels sections, which account for roughly 85 percent of the State's GHG emissions. The program works by establishing a hard cap on about 85 percent of total statewide GHG emissions. The cap starts at expected business-as-usual emissions levels in 2012 and declines two to three percent per year through 2020. Fewer and fewer GHG emissions allowances are available each year, requiring covered sources to reduce their emissions or pay increasingly higher prices for those allowances. The cap level is set in 2020 to ensure California complies with AB 32's emission reduction target of returning to 1990 GHG emission levels.

The scope of GHG emission sources subject to cap-and-trade in the first compliance period (2013-2014) includes all electricity generated and imported into California (the first deliverer of electricity into the

<sup>&</sup>lt;sup>31</sup> CARB, First Update to the Climate Change Scoping Plan: Building on the Framework, May 2014.

<sup>&</sup>lt;sup>32</sup> California Air Resources Board, California's 2017 Climate Change Scoping Plan: The Strategy for achieving California's 2030 greenhouse gas target, November 2017.

State in the "capped" entity and that one that will have to purchase allowances as appropriate), and large industrial facilities emitting more than 25,000 MMTCO<sub>2</sub>e per year (e.g., oil refineries and cement manufacturers). The scope of GHG emission sources subjected to cap-and-trade during the second compliance period (2015-2017) expands to include distributors of transportation fuels (including gasoline and diesel), natural gas, and other fuels. The regulated entity will be the fuel provider that distributes the fuel upstream (not the gas station). In total, the cap-and-trade program is expected to include roughly 350 large businesses, representing about 600 facilities. Individuals and small businesses will not be regulated.

Under the program, companies do not have individual or facility-specific reduction requirements. Rather, all companies covered by the regulation are required to turn in allowances<sup>33</sup> in an amount equal to their total GHG emissions during each phase of the program. The program gives companies the flexibility to either trade allowances with others or take steps to cost-effectively reduce emissions at their own facilities. Companies that emit more will have to turn in more allowances. Companies that can cut their emissions will have to turn in fewer allowances. Furthermore, as the cap declines, total GHG emissions are reduced. On October 20, 2011, CARB's Board adopted the final cap-and-trade regulation. The cap-and-trade program began on January 1, 2012, with an enforceable compliance obligation beginning with the 2013 GHG emissions.<sup>34</sup>

On July 17, 2017 California legislature passed AB 398 to extend the cap-and-trade program from January 1, 2021 through December 31, 2030. AB 398 established the Compliance Offsets Protocol Task Force to provide guidance in approving new offset protocols that increase direct environmental benefits in the state. Moreover, AB 398 continues the gradual reduction in the number of allowances given to industries and reduces carbon offset credits to 4 percent from 2021 through 2025 and 6 percent from 2026 through 2030.

# Executive Order B-30-15

On April 29, 2015, Governor Edmund G. Brown Jr. issued an executive order to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. This new emission reduction target of 40 percent below 1990 levels by 2030 is a step toward the ultimate goal of reducing emissions by 80 percent below 1990 levels by 2050. The executive order also specifically addresses the need for climate adaptation and directs state government to:

- Incorporate climate change impacts into the state's Five-Year Infrastructure Plan;
- Update the Safeguarding California Plan the state climate adaption strategy to identify how climate change will affect California infrastructure and industry and what actions the state can take to reduce the risks posed by climate change;
- Factor climate change into state agencies' planning and investment decisions; and
- Implement measures under existing agency and departmental authority to reduce GHG emissions.

<sup>&</sup>lt;sup>33</sup> "Allowance" means a limited tradable authorization to emit up to one metric ton of carbon dioxide equivalent.

<sup>&</sup>lt;sup>34</sup> CARB, Cap-and-Trade Program, website: https://www.arb.ca.gov/cc/capandtrade/capandtrade.htm, accessed: August 2019.

# California Senate Bills 1078, 107, 2, and 100; Renewables Portfolio Standard

Established in 2002 under California Senate Bill 1078 and accelerated in 2006 under California Senate Bill 107, California's RPS requires retail suppliers of electric services to increase procurement from eligible renewable energy resources by at least 1 percent of their retail sales annually, until they reach 20 percent by 2010.

On April 2, 2011, Governor Jerry Brown signed California Senate Bill 2 to increase California's RPS to 33 percent by 2020. This new standard also requires regulated sellers of electricity to procure 25 percent of their energy supply from certified renewable resources by 2016.

SB 100 was signed September 10, 2018 and requires electricity providers to provide renewable energy for at least 60 percent of their delivered power by 2030 and 100 percent use of renewable energy and zero-carbon resources by 2045. SB 100 also increases existing renewable energy targets, in accordance with the RPS, to 44 percent by 2024 and 52 percent by 2027.

### Low Carbon Fuel Standard

California Executive Order S-01-07 (January 18, 2007) requires a 10 percent or greater reduction in the average carbon intensity for transportation fuels in California regulated by CARB. CARB identified the LCFS as a Discrete Early Action item under AB 32, and the final resolution (09-31) was issued on April 23, 2009.

### Sustainable Communities and Climate Protection Act (SB 375)

California's Sustainable Communities and Climate Protection Act, also referred to as Senate Bill (SB) 375, became effective January 1, 2009. The goal of SB 375 is to help achieve AB 32's GHG emissions reduction goals by aligning the planning processes for regional transportation, housing, and land use. SB 375 requires CARB to develop regional reduction targets for GHGs, and prompts the creation of regional plans to reduce emissions from vehicle use throughout the State. California's 18 Metropolitan Planning Organizations (MPOs) have been tasked with creating Sustainable Community Strategies (SCS) in an effort to reduce the region's vehicle miles traveled (VMT) in order to help meet AB 32 targets through integrated transportation, land use, housing and environmental planning. Pursuant to SB 375, CARB set per-capita GHG emissions reduction targets from passenger vehicles for each of the State's 18 MPOs. On September 23, 2010, CARB issued a regional eight (8) percent per capita reduction target for the planning year 2020, and a conditional target of 13 percent for 2035.

### California Green Building Standards (CALGreen) Code

Although not originally intended to reduce greenhouse gases, California Code of Regulations (CCR) Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. Since then, Title 24 has been amended with recognition that energy-efficient buildings that require less electricity and reduce fuel consumption, which in turn decreases GHG emissions. The 2016 Title 24 standards (effective as of January 1, 2017) were revised and adopted in part to respond to the requirements of AB 32. Specifically, new development projects constructed within California after January 1, 2017 are subject to the mandatory planning and design, energy efficiency, water efficiency and conservation, material conservation and resources efficiency, and environmental quality measures of the 2016 California Green Building Standards (CALGreen) Code (California Code of Regulations, Title 24, Part 11).

# Local Policies and Regulations

The City is addressing the issue of global climate change through implementation of the Green LA, An Action Plan to Lead the Nation in Fighting Global Warming (LA Green Plan), which outlines the goals and actions that the City has established to reduce the generation and emission of GHGs from public and private activities. According to the LA Green Plan, the City is committed to the goal of reducing emissions of CO<sub>2</sub> to 35 percent below 1990 levels by the year 2030. To achieve this goal, the City is increasing the generation of renewable energy, improving energy conservation and efficiency, and changing transportation and land use patterns to reduce dependence on automobiles.

In 2010, the City adopted the 2010 California Green Building Standards Code, also known as CALGreen, with amendments, as Ordinance No. 181,480, thereby codifying provisions of CALGreen as the new Los Angeles Green Building Code. As stated in Section 99.01.101.1 of the LAMC, these regulations shall be known as the Los Angeles Green Building Code and may be cited as such. The Los Angeles Green Building Code is Article 9 of a total of 9 Articles of Chapter IX of the LAMC, and adopts by reference the CALGreen Code except as amended therein. The provisions of this code shall apply to the construction of every new building, every building alteration with a building permit valuation of \$200,000 or more, and every building addition, unless otherwise indicated in this code, throughout the City. The Los Angeles Green Building Code contains both mandatory and voluntary green building Code requires projects to achieve a 20 percent reduction in potable water use and wastewater generation, meet and exceed Title 24 Standards. In addition, the Proposed Project is required to implement applicable energy conservation measures to reduce GHG emissions such as those described in AB 32, described above.

On April 8<sup>th</sup> 2015, Los Angeles released pLAn, a sustainability plan for the City of Los Angeles. The plan covers a multitude of environmental, social, and economic sustainability issues. Many of the sustainability plan goals and actions relate to greenhouse gas reduction either specifically or by association. Actionable goals include increasing the green building standard for new construction, create benchmarking policy for building energy use, develop "blue, green, and black" waste bin infrastructure, reduce water use by 20%, and possibly require LEED Silver or better new construction.

# GHG Significance Threshold

The City, the SCAQMD nor the State CEQA Guidelines Amendments provide adopted quantitative thresholds of significance for addressing a mixed-use project's GHG emissions. Nonetheless, Section 15064.4 of the CEQA Guidelines Amendments serves to assist lead agencies in determining the significance of the impacts of GHGs. As required in Section 15064.4 of the CEQA Guidelines, this analysis includes an impact determination based on the following: (1) an estimate of the amount of greenhouse gas emissions resulting from the project; (2) a qualitative analysis or performance based standards; (3) a quantification of the extent to which the project increases greenhouse gas emissions as compared to the existing environmental setting; and (4) the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions.

In December 2008, the SCAQMD adopted an interim 10,000 metric tons CO<sub>2</sub>e (MTCO<sub>2</sub>e) per year screening level threshold for stationary source/industrial projects for which the SCAQMD is the lead agency. The SCAQMD continues to consider adoption of significance thresholds for non-industrial development projects. The most recent proposal issued in September 2010 uses the following tiered approach to evaluate potential GHG impacts from various uses:

**Tier 1:** Determine if CEQA categorical exemptions are applicable. If not, move to Tier 2.

**Tier 2:** Consider whether or not the proposed project is consistent with a locally adopted GHG reduction plan that has gone through public hearings and CEQA review, that has an approved inventory, includes monitoring, etc. If not, move to Tier 3.

**Tier 3:** Consider whether the project generates GHG emissions in excess of screening thresholds for individual land uses. The 10,000 MTCO<sub>2</sub>e/year threshold for industrial uses would be recommended for use by all lead agencies. Under option 1, separate screening thresholds are proposed for residential projects (3,500 MTCO<sub>2</sub>e/year), commercial projects (1,400 MTCO<sub>2</sub>e/year), and mixed-use projects (3,000 MTCO<sub>2</sub>e/year). Under option 2 a single numerical screening threshold of 3,000 MTCO<sub>2</sub>e/year would be used for all non-industrial projects. If the project generates emissions in excess of the applicable screening threshold, move to Tier 4.

**Tier 4:** Consider whether the project generates GHG emissions in excess of applicable performance standards for the project service population (population plus employment). The efficiency targets were established based on the goal of AB 32 to reduce statewide GHG emissions to 1990 levels by 2020. The 2020 efficiency targets are 4.8 MTCO<sub>2</sub>e per service population for project level analyses and 6.6 MTCO<sub>2</sub>e per service population for plan level analyses. If the project generates emissions in excess of the applicable efficiency targets, move to Tier 5.

**Tier 5:** Consider the implementation of CEQA mitigation (including the purchase of GHG offsets) to reduce the project efficiency target to Tier 4 levels.

The thresholds identified above are not adopted by SCAQMD or distributed for widespread public review and comment, and the working group tasked with developing the thresholds has not met since September 2010. The future schedule and likelihood of threshold adoption is uncertain. However, for the purpose of evaluating the GHG impacts associated with the Project, this analysis utilizes the proposed 3,000 MTCO<sub>2</sub>e per year Tier 3 threshold for mixed-use projects (3,000 includes construction and operational emissions). These draft thresholds have been used for other projects in the Basin.

In addition and separate from the above quantitative threshold, if the Project can demonstrate qualitative consistency with applicable plans, policies and regulations adopted for the purpose of reducing the emissions of GHGs, then impacts associated with GHG emissions would be less than significant.

# **Construction GHG Emissions**

Construction emissions represent an episodic, temporary source of GHG emissions. Emissions are generally associated with the operation of construction equipment and the disposal of construction waste. To be consistent with the guidance from the SCAQMD for calculating criteria pollutants from construction activities, only GHG emissions from on-site construction activities and off-site hauling and construction worker commuting are considered as Project-generated. As explained by California Air Pollution Controls Officers Association (CAPCOA) in its 2008 white paper, the information needed to characterize GHG emissions from manufacture, transport, and end-of-life of construction materials would be speculative at the CEQA analysis level.<sup>35</sup> CEQA does not require an evaluation of speculative impacts (*CEQA Guidelines* §15145). Therefore, the construction analysis does not consider such GHG emissions,

<sup>&</sup>lt;sup>35</sup> California Air Pollution Control Officers Association, CEQA & Climate Change, Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act, January 2008.

but does consider non-speculative on-site construction activities and off-site hauling and construction worker trips. All GHG emissions are identified on an annual basis.

Emissions of GHGs were calculated using CalEEMod 2016.3.2 for construction of the proposed Project and the results of this analysis are presented in Table VI-8, Project Construction GHG Emissions. As shown in Table VI-8, total construction GHG emissions would be 652.88 metric tons. Consistent with SCAQMD recommendations quantitatively, construction GHG emissions have been amortized over a 30-year period and have been added to the annual operational GHG emissions of the Project identified in Table VI-9.

,		
Phase	CO₂e Emissions (Metric Tons per Phase)	
2020	404.01	
2021	248.87	
Total Project Construction GHG Emissions	652.88	
GHG Emissions Amortized Over 30 Years	21.76	
See Appendix E for calculation sheets.		

Table VI-8
<b>Project Construction GHG Emissions</b>

# **Operational GHG Emissions**

The Project would improve the Project Site with a new five-story, 64.5-foot high mixed-use affordable housing building consisting 63 affordable units and one market-rate manager's unit, 2,443square feet of ground floor commercial space, and 50 total automobile parking spaces in a one level subterranean parking garage. The operations of the Project would generate GHG emissions from the usage of on-road motor vehicles, electricity, natural gas, water, and generation of solid waste and wastewater. Emissions of operational GHGs are shown in Table VI-9, Project Operational GHG Emissions. As shown, the GHG emissions generated by the Project would be approximately 1,046.69 CO<sub>2</sub>e MTY.

Project Operational GHG Emissions			
Emissions Source	Estimated Project Generated CO2e Emissions (Metric Tons per Year)		
Area Sources	15.49		
Energy Demand (Electricity & Natural Gas)	370.48		
Mobile (Motor Vehicles)	556.96		
Solid Waste Generation	31.55		
Water Demand	50.45		
Construction Emissions <sup>a</sup>	21.76		
Project Total	1,046.69		
<sup>a</sup> The total construction GHG emissions were amortized over 30 years and added to the operation of the Project.			
See Appendix E for calculation sheets.			

Table VI-9 Project Operational GHG Emissions

As noted previously, the SCAQMD released a draft guidance document regarding interim CEQA GHG significance thresholds. The SCAQMD proposed a tiered approach, whereby the level of detail and refinement needed to determine significance increases with a project's total GHG emissions. The SCAQMD also proposed a screening level of 3,000 metric tons of CO<sub>2</sub>e per year for mixed-use projects, under which project impacts would be considered "less than significant." As shown in Table VI-9, the Project's GHG emissions would be under the 3,000 MTCO<sub>2</sub>e per year threshold for mixed-use projects.

In addition, and separate from the quantitative analysis above, there is substantial evidence to support that the Project is qualitatively consistent with statewide goals and policies in place for the reduction of greenhouse gas emissions, including AB 32 and the corresponding Scoping Plan. As discussed previously, the City adopted the L.A. Green Plan to provide a citywide plan for achieving the City's GHG emissions targets, for both existing and future generation of greenhouse gas emissions. In order to further implement the L.A. Green Plan's goal of improving energy conservation and efficiency, the Los Angeles City Council has adopted multiple ordinances and updates to establish the current Los Angeles Green Building Code applicable to new development projects. As it relates to new development, the City adopted the Los Angeles Green Building Code, which incorporates applicable provisions of the CALGreen Code, and in some cases outlines more strict GHG reduction measures available to development projects in the City of Los Angeles. The Los Angeles Green Building Code requires projects to achieve a 20 percent reduction in potable water use and wastewater generation, meet and exceed Title 24 Standards adopted by the California Energy Commission. The Scoping Plan encourages communities to adopt building codes that go beyond the state code. Accordingly, as the Los Angeles Green Building Code meets and exceeds applicable provisions of the CALGreen Code, a new development project that can demonstrate it complies with the Los Angeles Green Building Code is considered consistent with statewide GHG-reduction goals and policies, including AB 32. The Project would be required to meet the LA Green Building Code and the CALGreen Code.

# GHG Emissions Associated With Motor Vehicles

Motor vehicle related GHG emissions are regulated at the Federal, State and local levels. As discussed in the CARB Scoping Plan, the transportation sector – largely the cars and trucks that move goods and people – is the largest contributor with 38 percent of the State's total GHG emissions. Many of the transportation-related reduction measures identified in the Scoping Plan are focused on improving motor vehicle efficiencies through more restrictive statewide laws and regulations. Some of these measures include Pavley I & II Standards for light-duty vehicles, Low Carbon Fuel Standards (LCFS), aerodynamic improvements for heavy-duty vehicles, and medium- and heavy-duty vehicle hybridizations. Together, these measures are estimated to reduce 2020 forecasted emissions by 52.60 MMTCO<sub>2</sub>E. These regulatory measures are aimed at improving efficiencies of the motor vehicle fleet mix across the State, and as such, GHG emissions from future motor vehicles accessing the Project Site would be reduced as a result of these statewide programs.

# b) Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

**No Impact.** As described above, through required compliance with the Los Angeles Green Building Code, the Project would be consistent with local and Statewide goals and policies aimed at reducing the generation of GHGs, including CARB's AB 32 Scoping Plan aimed at achieving 1990 GHG emission levels by 2020. Moreover, as a multi-family residential project that concentrates affordable units in a TPA that offers public transportation, the Project furthers the transit-oriented development and VMT reduction goals and objectives in the SCAG adopted 2016–2040 RTP/SCS. Therefore, the Project's generation of GHG

emissions would not conflict with an applicable plan, policy, or regulation for the purposes of reducing the emissions of GHGs. Impacts would be less than significant and no mitigation measures are required.

# **Cumulative Impacts**

Less Than Significant Impact. Although the Project is expected to emit GHGs, the emission of GHGs by a single project into the atmosphere is not itself necessarily an adverse environmental effect. As discussed in recent CEQA case law, <sup>36</sup> the global scope of climate change and the fact that CO<sub>2</sub> and other GHGs, once released into the atmosphere, are not contained in the local area of their emission means that the impacts to be evaluated are also global rather than local. For many air pollutants, the significance of their environmental impact may depend greatly on where they are emitted; for GHGs, it does not. For individual projects, like the Project, which are designed to accommodate long-term growth in California's population and economic activity, this fact gives rise to an argument that a certain amount of GHG emissions is as inevitable with population growth. Under this view, a significance criterion framed in terms of efficiency is superior to a simple numerical threshold because CEQA is not intended as a population control measure. These considerations militate in favor of consistency with meeting AB 32's Statewide goals as a permissible significance criterion for project emissions. Meeting our Statewide reduction goals does not preclude all new development. Rather, the Scoping Plan – the State's roadmap for meeting AB 32's target - assumes continued growth and depends on increased efficiency and conservation in land use and transportation from all Californians. To the extent a project incorporates efficiency and conservation measures sufficient to contribute its portion of the overall GHG reductions necessary, it can be reasonably concluded that the project's impact is not cumulatively considerable, because it is helping to solve the cumulative problem of greenhouse gas emissions as envisioned by California law.<sup>37</sup>

As discussed above, the Project's total construction and operational GHG emissions would not exceed the 3,000 MTCO<sub>2</sub>e/year threshold proposed by SCAQMD staff. In addition, and also detailed previously, through required implementation of the CALGreen Code and Los Angeles Green Building Code, the Project would be consistent with local and Statewide goals and policies aimed at reducing the generation of GHGs, including CARB's AB 32 Scoping Plan aimed at achieving 1990 GHG emission levels by 2020. As a mixed-use transit-oriented development within close proximity to regionally-serving transit infrastructure, the Project is also consistent with the VMT reduction goals of the adopted 2016–2040 RTP/SCS. Therefore, the Project's mixed-use design, urban location, and proximity to transit would be consistent with local and Statewide goals and S375) aimed at reducing the generation of GHGs through integrated transportation, land use, housing and environmental planning.

Similar to the Project, the related projects and all future projects in the State would be reviewed for consistency with applicable State, regional, and local plans, policies, or regulations for the reduction of GHGs. Therefore, based on the discussion above, the Project's generation of GHG emissions would not be considered cumulatively considerable because of the scope of the emissions (i.e., the Project would not exceed the 3,000 MTCO<sub>2</sub>e/year threshold proposed by SCAQMD) and because the Project would not conflict with an applicable plan, policy, or regulation for the purposes of reducing the emissions of GHGs. Therefore, the Project's cumulative impact would be less than significant and no mitigation measures are required.

<sup>&</sup>lt;sup>36</sup> Supreme Court of California, Center for Biological Diversity et al. v. California Department of Fish and Wildlife (2015), S217763, 11-13.

<sup>&</sup>lt;sup>37</sup> Addressing the Significance of Greenhouse Gas Emissions, supra, 4 Golden Gate U. Envtl. L.J. at p. 210.

# 9. HAZARDS AND HAZARDOUS MATERIALS

The following analysis utilizes information provided in the *Phase I Environmental Site Assessment*, prepared by Geocon West Inc., May, 2018 (Phase I ESA). The Phase I ESA is available as Appendix G.

# a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

**Less Than Significant Impact.** Uses sensitive to hazardous emissions (i.e., sensitive receptors) in the area include the future residents of the Project and the nearby residential land uses. The following provides an analysis of potential impacts during construction and operation of the Project.

### Construction

The proposed Project would involve the construction of a mixed-use building with residential and commercial retail uses. Construction of the Project would involve routine handling of small quantities of hazardous or potentially hazardous materials, such as gasoline, diesel fuel, lubricants, and other petroleum-based products used to operate and maintain construction equipment and vehicles. This handling of hazardous materials would be a temporary activity and coincide with the short-term construction phase of the Project. The transport, use, and storage of hazardous materials during the construction and operation of the Project would be conducted in accordance with applicable state and federal laws, such as the Hazardous Materials Transportation Act, Resource Conservation and Recovery Act, the California Hazardous Material Management Act, and the California Code of Regulations, Title 22. Through compliance with these regulatory requirements, no significant hazards to the public or environment would result in connection with the construction of the Project.

A portion of the Project Site (2322 E. 1st Street) is listed on the HAZNET database as "Soto Station" for removing approximately 500 tons of contaminated soil from the Site in 2004 and 2005. The soil was removed during the construction of the Metro subway tunnel and station. Though the Phase I ESA has revealed no evidence of recognized environmental conditions (RECs) in connection with the Project Site, there are records indicating underground storage tanks (USTs) were present on one or more portions of the adjacent property to the north now occupied by the Metro Soto Station.

The Phase I ESA recommended the preparation of Soil Vapor Study to determine if there are potential volatile organic compounds in soil vapor beneath the site. A Soil Vapor Study was prepared in September 2019 by Geocon West, Inc (see Appendix G). The results of the soil vapor survey indicate that benzene, perchloroethylene (PCE), and chloroform are present in soil vapor samples collected at the site, at concentrations which exceed their respective screening levels for soil vapor in a residential land use scenario. Based on this and as discussed in the soil vapor study, concentrations of these contaminants may pose an unacceptable risk to human health of future site residents, workers, and visitors via vapor intrusion into indoor air. The soil vapor study recommended that a soil vapor mitigation technology be integrated into the design of the proposed residential development to reduce the potential risk of soil vapor intrusion into the future structure. Therefore, a project design feature (HAZ-PDF-1) would be implemented, constructing a mitigation barrier below the slab to vent the vapors into the outdoor air. This barrier would reduce the potential exposure to potential contaminated soils and would not expose future residents, guests, workers, and transit users to hazardous material risks. As such, this impact would be less than significant.

# Project Design Feature

**PDF HAZ-1** To mitigate the potential risk of soil vapor intrusion into the proposed structure, the Project will incorporate a passive venting system into the design of the Project.

# Operation

For the residential units and commercial retail, general household hazardous waste generation would be expected. HHW includes used batteries, electronic waste, and other waste prohibited or discouraged from being disposed of at local landfills. Use of common household hazardous materials and their disposal do not present a substantial health risk to the community. Regular operation and maintenance of residential units and the commercial retail space would not involve the use, storage, transport, or disposal of hazardous wastes and substances. Therefore, with implementation of appropriate hazardous materials management protocols at the Project Site and compliance with all applicable local, state, and federal laws and regulations relating to environmental protection and the management of hazardous materials, the Project's impact associated with the routine transport, use, or disposal of hazardous materials during construction and operation of the Project would be less than significant.

# b) Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

**Less Than Significant.** The Phase I ESA reviewed Sanborn maps for the years 1888, 1890, 1894, 1906, 1921, 1949, and 1970 to obtain information pertaining to historical development and uses of the Project Site. Additionally, historical aerial photographs for the years 1923, 1928, 1938, 1948, 1952, 1964, 1972, 1977, 1983, 1989, 1994, 2002, 2005, 2009, 2010, 2012 were reviewed for indications of past land uses that had the potential to have impacted the Project Site through the use, storage or disposal of hazardous substances and/or petroleum. Table VI-10, Historical Observations summarizes information on the maps and photographs for the Project Site and nearby properties.

Year	Site	Adjacent Properties		
	Sanborn Maps			
1888	No structures or land uses are depicted on the Project Site.	No structures or land uses are depicted on the adjacent properties. E. 1st Street is depicted north of the Project Site.		
1890	Conditions are similar to those depicted on the 1888 map	Conditions are similar to those depicted on the 1888 map except for dwellings depicted northeast of the Project Site beyond E. 1st Street and southwest of the Project Site, and S. Soto Street depicted east of the Project Site.		
1894	Conditions are similar to those depicted on the 1890 map	Conditions are similar to those depicted on the 1890 map.		
1906	Two dwellings and a stable are depicted on the Project Site.	Dwellings are depicted on the adjacent properties and the properties beyond E. 1st Street and S. Soto Street.		
1921	Five dwellings, a shed, and an automobile outbuilding are depicted on the Project Site.	Dwellings and a store are depicted north of the Project Site beyond E. 1st Street. Dwellings and an automobile repair shop are adjacent to the northeast of the Project Site. Stores are depicted northeast of the Project Site beyond E. 1st Street. Dwellings, apartments, and stores are depicted east of the		

# Table VI-10 Historical Observations

Year	Site	Adjacent Properties
		Project Site beyond S. Soto Street. Dwellings with various outbuildings are depicted south, southeast, and east of the Project Site.
1949	Eight dwellings, a shed, two	Additional stores and dwellings are depicted north and
	automobile outbuildings, a restaurant, a store, and a candy manufacturing shop are depicted on the Project Site.	northeast (beyond E. 1st Street), east (beyond S. Soto Street), south, southwest, and west of the Project Site. A restaurant is depicted northeast of the Project Site beyond E. 1 <sup>st</sup> Street. Two dwellings, an automobile repair shop, a tire & battery shop, and a gas station are adjacent to the northeast of the Project Site.
1970	Conditions are similar to those depicted on the 1949 map except for two stores and a bakery are depicted in the northern portion of the Project Site.	Conditions are similar to those depicted on the 1945 map except for the following. Two "iron" structures are depicted adjacent to the northeast of the Project Site. The automobile repair shop, tire & battery shop, and gas station are not depicted northeast of the Project Site. Additional stores and a commercial structure are depicted north of the Project Site beyond E. 1st Street.
	/	Aerial Photographs
1923	Five residences with a few outbuildings were present on the Project Site.	Residences and commercial structures were north and northeast of the Project Site beyond E. 1 <sup>st</sup> Street and east of the Project Site beyond S. Soto Street. Two residences and a commercial structure were adjacent to the northeast of the Site. Residences were south and southwest of the Project Site. Residences and commercial structures were west of the Project Site.
1928	The resolution of the photograph is poor; however, it appears conditions were similar to those observed on the 1923 photograph except for a commercial structure in the northern portion of the Project Site.	The resolution of the photograph is poor; however it appears conditions were similar to those observed on the 1923 photograph.
1938	Conditions were similar to those observed on the 1928 photograph except for additional structures in the northern and southwestern portions of the Project Site.	Conditions were similar to those observed on the 1928 photograph except that a newer commercial structure was adjacent to the northeast of the Project Site.
1948	The resolution of the photograph is poor; however it appears conditions were similar to those observed on the 1938 photograph.	The resolution of the photograph is poor; however it appears conditions were similar to those observed on the 1938 photograph.
1952	Conditions were similar to those observed on the 1948 photograph.	Conditions were similar to those observed on the 1948 photograph.

Year	Site	Adjacent Properties			
1964	Conditions were similar to those observed on the 1952 photograph.	Conditions were similar to those observed on the 1952 photograph except newer commercial structures were adjacent to the northeast of the Project Site and north and northeast of the Project Site beyond E. 1st Street.			
1972 & 1977	Conditions were similar to those observed on the 1964 photograph.	Conditions were similar to those observed on the 1964 photograph.			
1983 & 1989	Conditions were similar to those observed on the 1972 and 1977 photographs.	Conditions were similar to those observed on the 1972 and 1977 photographs.			
1994	Conditions were similar to those observed on the 1983 and 1989 photographs.	Conditions were similar to those observed on the 1983 and 1989 photographs.			
2002	Conditions were similar to those observed on the 1994 photograph.	Conditions were similar to those observed on the 1994 photograph.			
2005	The Project Site was a vacant lot.	Conditions were similar to those observed on the 2002 photograph except for a vacant lot adjacent to the northeast of the Project Site.			
2009	The northern portion of the Project Site was part of the Metro Soto Station (under construction). The southern portion of the Project Site appears to have been used as a construction staging area.	Conditions were similar to those observed on the 2005 photograph except for Metro Soto Station under construction adjacent to the northeast of the Project Site.			
2010 & 2012	The northern portion of the Project Site was part of the Metro Soto Station. The southern portion of the Project Site was a vacant lot.	Conditions were similar to those observed on the 2009 except for the Metro Soto Station adjacent to the northeast of the Project Site.			

As discussed in impact VI. 9a, the soil vapor study recommended that a soil vapor mitigation technology be integrated into the design of the proposed residential development to reduce the potential risk of soil vapor intrusion into the future structure. Therefore, a project design feature (HAZ-PDF-1) would be implemented, constructing a mitigation barrier below the slab to vent the vapors into the outdoor air. This barrier would reduce the potential exposure to potential contaminated soils and would not expose future residents, guests, workers, and transit users to hazardous material risks. As such, this impact would be less than significant. Based on a review of the California Division of Oil, Gas and Geothermal Resources (DOGGR) Oil and Gas Well Finder, the Project Site is located within the Boyle Heights (ABD) Oil Field.<sup>38</sup> However, no oil wells are present on site.<sup>39</sup>

<sup>39</sup> Ibid.

<sup>&</sup>lt;sup>38</sup> California Department of Conservation, Division of Oil, Gas and Geothermal Resources, Well Finder, website: https://maps.conservation.ca.gov/doggr/wellfinder, accessed: August 2019.

According to the U.S. Environmental Protection Agency (EPA), the Project Site, being located in Los Angeles County, is situated within Radon Zone 2, with a predicted average indoor radon screening level between 2 and 4 picoCuries per Liter (pCi/L, moderate potential), which is below the 4.0 pCi/L action level set by the United States Environmental Protection Agency (USEPA).

The Project Site has been identified to be within a Methane Zone.<sup>40</sup> These areas pose a risk of methane intrusion emanating from geologic formations. Due to the existing potential environmental risk associated with construction in a Methane Zone, the Project would be subject to developmental regulations pertaining to ventilation and methane gas detection systems that are mandated by the City. Project development would be governed by the provisions of City of Los Angeles Building Code Chapter 71, Methane Mitigation Standards Ordinance. This ordinance provides installation procedures, design parameters and test protocols for methane gas mitigation systems. More specifically, the Methane Mitigation Standards ordinance includes requirements for site testing, methane mitigation systems, and ventilation systems.

Compliance with applicable laws and regulations during construction and operation of the Project would reduce the impacts associated with the potential release of hazardous materials to less than significant and no mitigation measures are required.

# c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

**Less Than Significant Impact.** Breed Street Elementary School is located within 480 feet (0.09 mile) of the Project Site, at 2226 E 3rd Street. Theodore Roosevelt School is located approximately 0.21 mile south of the Project Site, at 456 S Mathews Street. As discussed in response to Thresholds XI.9a and 9b above, potentially hazardous materials such as oil or fuel utilized by heavy-duty construction equipment, may be utilized during construction and would be required to comply with local, state, and federal policies for handling such materials and equipment properly. As discussed in impact VI. 9a, the soil vapor study recommended that a soil vapor mitigation technology be integrated into the design of the proposed residential development to reduce the potential risk of soil vapor intrusion into the future structure. Therefore, a project design feature (HAZ-PDF-1) would be implemented, constructing a mitigation barrier below the slab to vent the vapors into the outdoor air. This barrier would reduce the potential exposure to potential contaminated soils and would not expose future residents, guests, workers, and transit users to hazardous material risks. Potential soil vapor intrusion would have no impact on the adjacent schools. As discussed in Section III, *Air Quality*, emissions generated by construction of the Project would be below SCAQMD LSTs and would not be significant.

Therefore, given that construction and operational activities would be required to comply with local, state, and federal policies for handling any minor hazardous materials and criteria pollutant emissions would be below SCAQMD threshold levels, impacts associated with potential hazardous emissions during construction and operation would be less than significant.

<sup>&</sup>lt;sup>40</sup> City of Los Angeles Department of City Planning Zone Information & Map Access System, website: http://zimas.lacity.org, accessed: August 2019.

# d) Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Less Than Significant Impact. The Project Site is not a City designated Hazardous Waste/Border Zone Property.<sup>41</sup> As discussed previously, a portion of the Project Site (2322 E. 1st Street) is listed on the HAZNET database as "Soto Station" for removing approximately 500 tons of contaminated soil from the Site in 2004 and 2005. The soil was removed during the construction of the Metro subway tunnel and station. Though the Phase I ESA has revealed no evidence of RECs in connection with the Project Site, there are records indicating USTs were present on one or more portions of the adjacent property to the north now occupied by the Metro Soto Station. There are also records indicating that contaminated soil was removed during the construction of the Metro Soto Station. It is unknown if the soil removal was associated with the removal of the USTs or if contaminated soil remains beneath portions of the Soto Station outside of the areas excavated during construction. Based on the extensive excavation that was performed during construction of the subway it is possible that potential soil contamination for the historic uses of the property would have been removed; however, without records documenting the extent of the removal, the threat of a vapor encroachment risk to the Project Site cannot be ruled out. As discussed in impact VI. 9a, the soil vapor study recommended that a soil vapor mitigation technology be integrated into the design of the proposed residential development to reduce the potential risk of soil vapor intrusion into the future structure. Therefore, a project design feature (HAZ-PDF-1) would be implemented, constructing a mitigation barrier below the slab to vent the vapors into the outdoor air. This barrier would reduce the potential exposure to potential contaminated soils and would not expose future residents, guests, workers, and transit users to hazardous material risks.

Because the Project would not be located on a site with potential to create a significant hazard to the public or environment, this impact would be less than significant.

# e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

**No Impact.** The Hawthorne Municipal Airport is the closest airport to the Project Site, located approximately 10.2 miles to the south. In addition, the Project Site is not located within an airport land use plan. As such, the Project would not expose people to excessive aircraft noise levels. Therefore, no impact would occur and no mitigation measures are required.

# f) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

**Less Than Significant Impact.** There are no critical facilities, lifeline systems, or disaster routes in the immediate vicinity of the Project Site.<sup>42,43</sup> However, E. 1<sup>st</sup> Street and S. Soto Street are classified as

<sup>&</sup>lt;sup>41</sup> City of Los Angeles Department of City Planning Zone Information & Map Access System, website: http://zimas.lacity.org, accessed: August 2017.

<sup>&</sup>lt;sup>42</sup> City of Los Angeles Department of City Planning, Los Angeles City General Plan Safety Element, Exhibit H, Critical Facilities & Lifeline Systems in the City of Los Angeles, Adopted November 1996.

<sup>&</sup>lt;sup>43</sup> Ibid.

Secondary Disaster Routes by Los Angeles County.<sup>44</sup> Nonetheless, as discussed in Section VI.17, Transportation, below, the Project would not result in any significant traffic impacts. Moreover, the Project would not cause permanent alterations to vehicular circulation routes and patterns, or impede public access or travel upon public rights-of-way. An emergency response plan would be submitted to LAFD during review of plans as part of the standard building permit process. Furthermore, no full road closures are anticipated during construction of the Project, and none of the surrounding roadways would be impeded. Access for emergency service providers and any evacuation routes would be maintained during construction and operation. Therefore, impacts would be less than significant and no mitigation measures are required.

# g) Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

**No Impact.** The Project Site is located in a highly urbanized area of Boyle Heights, and does not include wildlands or high fire hazard terrain or vegetation. The Project Site is not located in a Very High Fire Hazard Severity Zone;<sup>45</sup> nor is the Project Site within a wildland fire hazard area.<sup>46</sup> Therefore, no impact would occur relative to exposure to wildfire hazards and no mitigation measures are required.

# **Cumulative Impacts**

Less Than Significant Impact. Development of the Project in combination with the related projects could increase, to some degree, the risks associated with the use and potential accidental release of hazardous materials in the City. With respect to the related projects, the potential presence of hazardous substances would require evaluation on a case-by-case basis, in combination with the development proposals for each of those properties. However, the Project's impact would be less than significant with mitigation incorporated and, therefore, would not substantially contribute to a cumulative impact. Furthermore, local municipalities will be required to follow local, State, and federal laws regarding hazardous materials. With compliance with local, State, and federal laws pertaining to hazardous materials, cumulative impacts to hazardous materials would be less than significant and no mitigation measures are required.

# **10. HYDROLOGY AND WATER QUALITY**

The following analysis utilizes information provided in the *Phase I Environmental Site Assessment*, prepared by Geocon West Inc., May, 2018 (Phase I ESA). The Phase I ESA is available as Appendix G.

# a) Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Less Than Significant Impact.

<sup>&</sup>lt;sup>44</sup> Los Angeles County Department of Public Works, Disaster Route Maps, City of Los Angeles West Area, website: http://dpw.lacounty.gov/dsg/disasterroutes/map/disaster\_rdm-South.pdf, accessed: August 2019.

<sup>&</sup>lt;sup>45</sup> City of Los Angeles Department of City Planning Zone Information & Map Access System, website: http://zimas.lacity.org, accessed: August 2019.

<sup>&</sup>lt;sup>46</sup> City of Los Angeles Department of City Planning, Los Angeles City General Plan Safety Element, Exhibit D, Selected Wildfire Hazard Areas in the City of Los Angeles, Adopted November 1996.

# Construction

Construction activities associated with the Project have the potential to degrade water quality through the exposure of surface runoff (primarily rainfall) to exposed soils, dust, and other debris, as well as from runoff from construction equipment. Construction associated with the Project would be subject to the requirements of LARWQCB Order No. R4-2012-0175, National Pollution Discharge Elimination System (NPDES) No. CAS004001, effective December 28, 2012, Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within the Coastal Watersheds of Los Angeles County (the "Los Angeles County MS4 Permit"), which controls the quality of runoff entering municipal storm drains in Los Angeles County. Section VI.D.8 of the Los Angeles County MS4 Permit, Development Construction Program, requires permittees (which include the City) to enforce implementation of Best Management Practices (BMPs), including, but not limited to, approval of an Erosion and Sediment Control Plan (ESCP) for all construction activities within their jurisdiction.<sup>47</sup> ESCPs are required to include the elements of a Stormwater Pollution Prevention Plan (SWPPP). Accordingly, the construction contractor for the Project would be required to implement BMPs that would meet or exceed local, State, and federal mandated guidelines for stormwater treatment to control erosion and to protect the quality of surface water runoff during the construction period. BMPs utilized could include, without limitation: disposing of waste in accordance with all applicable laws and regulations; cleaning up leaks, drips, and spills immediately; conducting street sweeping during construction activities; limiting the amount of soil exposed at any given time; covering trucks; keeping construction equipment in good working order; and installing sediment filters during construction activities. Therefore, potential impacts during construction of the Project would be less than significant and no mitigation measures are required.

# Operation

With respect to water quality during operation of the Project, Los Angeles County and all incorporated cities within Los Angeles County (except the City of Long Beach) are permittees under the Los Angeles County MS4 Permit. Section VI.D.7 of the Los Angeles County MS4 Permit, Planning and Land Development Program, is applicable to, among others, land-disturbing activities that result in the creation or addition or replacement of 5,000 square feet or more of impervious surface area on an already developed site, which would apply to the Project.<sup>48</sup> This Program requires, among other things, that the Project runoff volume from the following be retained on-site: (a) the 0.75 inch, 24-hour rain event; or (b) the 85<sup>th</sup> percentile, 24-hour rain event, as determined from the Los Angeles County 85<sup>th</sup> percentile precipitation isohyetal map, whichever is greater. The Project would also be subject to the BMP requirements of the Standard Urban Storm Water Mitigation Plan (SUSMP) adopted by LARWQCB. As a permittee, the City is responsible for implementing the requirements of the County-wide SUSMP within its boundaries. A Project-specific SUSMP would be implemented during the operation of the Project. In compliance with the Los Angeles County MS4 Permit and SUSMP requirements, the Project would be required to retain, treat and/or filter stormwater runoff through biofiltration before it enters the City stormwater drain system. The system incorporated into the Project must follow design requirements set forth in the MS4 permit and must be approved by the City. Adherence to the requirements of the MS4 Permit and SUSMP would ensure that potential impacts associated with water quality would be less than significant. With appropriate Project design and compliance with the applicable federal, State, local

<sup>&</sup>lt;sup>47</sup> California Regional Water Quality Control Board – Los Angeles Region, MS4 Discharges within the Coastal Watersheds of Los Angeles County Except those Discharges Originating from the City of Long Beach MS4, Order No. R4-2012-0175, as amended by Order WQ 2015-0075, NPDES No. CAS004001, page 116 et seq.

<sup>&</sup>lt;sup>48</sup> Ibid., page 97 et seq.

regulations, and permit provisions, impacts of the Project related to stormwater runoff quality would be less than significant.

In addition, the Project would be subject to the provisions of the City's Low Impact Development (LID) Ordinance, which is designed to mitigate the impacts of increases in runoff and stormwater pollution as close to the source as possible. LID comprises a set of site design approaches and BMPs that promote the use of natural systems for infiltration, evapotranspiration and use of stormwater, as appropriate. The LID Ordinance will require the Project to incorporate LID standards and practices to encourage the beneficial use of rainwater and urban runoff, reduce stormwater runoff, promote rainwater harvesting, and provide increased groundwater recharge. In this regard, the City has established review procedures to be implemented by the Department of City Planning, LADBS, and Department of Public Works that parallel the review of the SUSMP discussed above. Incorporation of these features would minimize the increase in stormwater runoff from the Project Site. The SUSMP consists of structural BMPs built into the Project for ongoing water quality purposes over the life of the Project. Additionally, because the Project Site does not currently operate under a SUSMP, implementation of the Project with a SUSMP would improve water quality leaving the Project Site compared to existing conditions. Therefore, impacts would be less than significant and no mitigation measures are required.

# b) Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

# Less Than Significant Impact.

The Project does not involve the extraction of groundwater and it would not result in a reduction in aquifer volume or lower the local groundwater table. According to the Project's Phase I ESA, groundwater within the vicinity of the Project Site ranged from 31.48 to 35.51 feet in October 2013. As the Project does not plan to drill more than 11 feet into the ground, no dewatering (i.e., removal of groundwater) during construction is anticipated.

Additionally, operation of the Project would not interfere with any groundwater recharge activities within the area. The Project Site is located in a highly urbanized area and two of the Project Site's parcels are currently vacant. The other four Project parcels include the Metro Soto Station and Plaza. The Project Site contains minimal areas of landscaping. Thus, the degree to which surface water infiltration and groundwater recharge currently occurs on-site is negligible. Even so, construction and operation of the Project would not substantially affect groundwater levels beneath the Project Site, including depleting groundwater supplies or resulting in a substantial net deficit in the aquifer volume or lowering of the local groundwater table. Therefore, impacts on groundwater would be less than significant, and no mitigation measures are required.

# c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i) Result in substantial erosion or siltation on- or off-site?

**Less Than Significant Impact.** As discussed above, the Project would be designed to comply with the City of Los Angeles's LID design standard. The proposed stormwater BMPs would require rainwater harvesting and/or bio-filtration flow-through planters, and the entirety of the building's roof drains will be diverted to the proposed stormwater BMPs and the overflow discharge will be discharged to S. Soto Street or E. 1<sup>st</sup> Street a curb drain or parkway drain. Further, Project construction would comply with applicable NPDES

and City requirements including those requiring the preparation of a Project-specific SWPPP. Pursuant to the LID Ordinance, the Project would be required to capture and manage the first threequarters of an inch of runoff flow during storm events as defined in the City's BMPs. As described earlier, the rainwater harvesting and/or bio-filtration flow-through planters would meet the City of Los Angeles' stormwater capture and reuse criteria and LID design standards. The Project would result in less than significant impacts associated substantial erosion or siltation on-or off-site and no mitigation is required.

- ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?
- iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

**Less Than Significant Impact.** The following response addresses Thresholds c.II and C.III. Runoff associated with the Project would be directed in non-erosive drainage devices to either landscaped areas for evaporation and/or directed to the existing City storm drain system. The Project would be subject to the provisions of the LID Ordinance. In this regard, the City has established review procedures to be implemented by the Department of City Planning, LADBS, and Department of Public Works that expand the review of the SUSMP discussed above. Incorporation of these features would minimize the stormwater runoff from the Project Site. It can be reasonably anticipated, then, that the existing storm drain system has adequate capacity to accommodate flows from the Project Site. Therefore, impacts would be less than significant and no mitigation measures are required.

iv) Impede or redirect flood flows?

**No Impact.** According to the City of Los Angeles General Plan Safety Element, the Project Site is not located with a 100-Year or 500-Year flood plain.<sup>49</sup> The Project is a mixed-use project that would not redirect or cause impediment or redirection of flood flows. Therefore, no impact would occur and no mitigation measures are required.

# d) In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

**No Impact.** As discussed above, the Project Site is not located with a 100-Year or 500-Year flood plain.<sup>50</sup> Additionally, the Project Site is not located in a potential inundation area or an area potentially impacted by a tsunami.<sup>51</sup> There are also no major water bodies in the vicinity of the Project Site that would put the site at risk of inundation by seiche. As such, the Project is not in a flood hazard, tsunami, or seiche zone and there is no potential for risk of the release of pollutants due to project inundation. No impact would occur and no mitigation measures are required.

<sup>&</sup>lt;sup>49</sup> City of Los Angeles Department of City Planning, Los Angeles City General Plan Safety Element, Exhibit F, 100-Year & 500-Year Flood Plains in the City of Los Angeles, Adopted November 1996.

<sup>&</sup>lt;sup>50</sup> Ibid.

<sup>&</sup>lt;sup>51</sup> City of Los Angeles Department of City Planning, Los Angeles City General Plan Safety Element, Exhibit G, Inundation & Tsunami Hazard Areas in the City of Los Angeles, Adopted November 1996.

# e) Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

**Less Than Significant Impact.** As discussed above, the Project would comply with applicable NPDES and City requirements, which would include the use of BMPs during construction and operation of the Project as detailed in a SWPPP and in the LID ordinance. Project construction would occur in accordance with City Building Code Chapter IX, which requires necessary permits, plans, plan checks, and inspections to avoid or reduce the effects of sedimentation and erosion. In addition, the Project would require approval of an erosion control plan and would be required to prepare a SWPPP in accordance with the NPDES permit. The SWPPP incorporates BMPs in accordance with the City of Los Angeles' Best Management Practices Handbook, Part A Construction Activities to control erosion including grading and dust control measures. The Project would not conflict or obstruct implementation of a water quality control plan or sustainable groundwater management plan and impacts would be less than significant and no mitigation measures are required.

# **Cumulative Impacts**

**Less Than Significant Impact**. The related projects would potentially increase the volume of stormwater runoff and contribute to pollutant loading in stormwater runoff within the local vicinity of the Project Site. Pursuant to the LID Ordinance, however, related projects would be required to capture and manage the first three-quarters of an inch of runoff flow during storm events as defined in the City's LID BMPs, through one or more of the City's preferred LID improvements: on-site infiltration, capture and reuse, or biofiltration/biotreatment BMPs, to the maximum extent feasible.

Further, the related projects would be subject to the NPDES permit requirements for both construction and operation. Each project greater than one-acre in size would be required to develop a SWPPP and would be evaluated individually to determine appropriate BMPs and treatment measures to avoid or minimize impacts to water quality. Smaller projects would be minor infill projects with drainage characteristics similar to existing conditions, with negligible impacts. In addition, the City of Los Angeles Department of Public Works reviews all construction projects on a case-by-case basis to ensure that sufficient local and regional drainage capacity is available.

The cumulative impacts context for flood hazards is the corporate boundary of City of Los Angeles, which provides emergency response services for flood events and participates in the National Flood Insurance Program (NFIP). The NFIP is a Federal program enabling property owners in participating communities to purchase protection against property losses due to flooding.

All related projects are subject to restrictions and requirements as part of the City's existing permitting process and a detailed review of the City of Los Angeles General Plan Safety Element would be conducted as part of the plan check process. Related projects within the 100-year flood plain or floodway would be required to implement appropriate flood plain management measures in the design of new buildings. Compliance with these existing regulatory requirements would ensure the any related projects would not place housing within a flood hazard area without incorporating proper measures and reducing this impact to less than significant and would not be cumulatively considerable.

Similarly, the Project would comply with applicable NPDES and City requirements, which would include the use of BMPs during construction and operation of the Project as detailed in a SWPPP and in the City's LID ordinance. The Project would include rainwater harvesting and/or bioinfiltration flow-through planters as a BMP. The Los Angeles Department Public Works would review the Project to ensure that sufficient local and regional drainage capacity is available. The Project would not be located in a 100-Year or 500-Year flood plain or near an inundation area subject to seiche or tsunami. The Project's contribution

to cumulative impacts to hydrology and water quality and flooding hazards would not be cumulatively considerable. Impacts would be less than significant.

# 11. LAND USE AND PLANNING

## a) Would the project physically divide an established community?

**No Impact.** The Project Site is located in a highly urbanized area and two of the Project Site's parcels are currently vacant. The other four Project parcels include the Metro Soto Station and Plaza. The Project Site is relatively flat and is surrounded by adjacent residences to the south, residences and commercial uses to the west across an alleyway, residences to the east across S. Soto Street, and residences and commercial uses to the north across E. 1<sup>st</sup> Street.

The Project would not cause any permanent street closures, block access to any surrounding land use, or cause any change in the existing street grid system. Since the Project would be developed within a long-established urban area, the Project would not physically divide an established community by creating new streets or by blocking or changing the existing street grid pattern. Since the Project would not physically disrupt or divide the surrounding established community, no impact would occur and no mitigation measures are required.

# b) Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

**Less Than Significant Impact.** The determination of consistency with applicable land use policies and ordinances is based upon a review of the previously identified planning and zoning documents that regulate land use or guide land use decisions pertaining to the Site. A project is considered consistent with the provisions and general policies of an applicable City or regional land use plans and regulations if it is consistent with the overall intent of the plans and would not preclude the attainment of its primary goals. A conflict between a project and an applicable plan is not necessarily a significant impact under CEQA unless the inconsistency will result in an adverse physical change to the environment that is a "significant environmental effect" as defined by CEQA Guidelines Section 15382.

As discussed below, the Project would be substantially consistent with all of the applicable plans, policies and regulations adopted for the purpose of avoiding or mitigating an environmental effect associated with development of the Project Site. Therefore, Project impacts related to land use and planning would be less than significant and no mitigation measures are required.

### **Regional Plans, Policies, Regulations**

### Southern California Association of Governments

SCAG is the Metropolitan Planning Organization (MPO) for six counties: Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. As the federally-designated Metropolitan Planning Organization, SCAG is mandated to research and create plans for transportation, growth management, hazardous waste management, and air quality. Applicable SCAG publications are discussed below.

### SCAG Regional Comprehensive Plan

SCAG has prepared the 2008 Regional Comprehensive Plan (2008 RCP) in response to SCAG's Regional Council directive in its 2002 Strategic Plan to define solutions to interrelated housing, traffic, water, air

quality, and other regional challenges. The 2008 RCP is an advisory document that describes future conditions if current trends continue, defines a vision for a healthier region, and recommends an Action Plan with a target year of 2035. The 2008 RCP may be voluntarily used by local jurisdictions in developing local plans and addressing local issues of regional significance. The plan includes nine chapters addressing land use and housing, transportation, air quality, energy, open space, water, solid waste, economy, and security and emergency preparedness. The action plans contained therein provide a series of recommended near-term policies that developers and key stakeholders should consider for implementation, as well as potential policies for consideration by local jurisdictions and agencies when conducting project review.

The 2008 RCP replaced the Regional Comprehensive Plan and Guide (RCPG) for use in SCAG's Intergovernmental Review (IGR) process. SCAG's Community, Economic and Human Development Committee and the Regional Council took action to accept the 2008 RCP, which now serves as an advisory document for local governments in the SCAG region for their information and voluntary use in developing local plans and addressing local issues of regional significance. However, as indicated by SCAG, because of its advisory nature, the 2008 RCP is not used in SCAG's IGR process. Rather, SCAG reviews new projects based on consistency with the 2016–2040 RTP/SCS (discussed below).

# SCAG 2016–2040 RTP/SCS

On September 30, 2008, SB 375 was passed to help achieve AB 32 goals related to the reduction of greenhouse gases through regulation of cars and light trucks. SB 375 aligns three policy areas of importance to local government: (1) regional long-range transportation plans and investments; (2) regional allocation of the obligation for cities and counties to zone for housing; and (3) a process to achieve GHG emissions reductions targets for the transportation sector. It establishes a process for CARB to develop GHG emissions reductions targets for each region (as opposed to individual local governments or households). SB 375 also requires MPOs to prepare an SCS within the RTP that guides growth while taking into account the transportation, housing, environmental, and economic needs of the region. SB 375 uses CEQA streamlining as an incentive to encourage residential projects, which help achieve AB 32 goals to reduce GHG emissions. On September 23, 2010, CARB adopted regional targets for the reduction of GHG emissions applying to the years 2020 and 2035. For the area under SCAG jurisdiction, including the Project area, CARB adopted Regional Targets for reduction of GHG emissions by eight percent for 2020 and by 13 percent for 2035. On February 15, 2011, CARB's Executive Officer approved the final targets.

On April 7, 2016, the Regional Council of SCAG adopted the 2016–2040 RTP/SCS. For the past three decades, SCAG has prepared RTPs with the primary goal of increasing mobility for the region's residents and visitors. The 2016–2040 RTP/SCS includes a strong commitment to reduce emissions from transportation sources to comply with SB 375, improve public health, and meet the NAAQS as set forth by the Federal Clean Air Act. As such, the 2016–2040 RTP/SCS contains a regional commitment for the broad deployment of zero- and near-zero-emission transportation technologies in the 2016-2040 time-frame and clear steps to move toward this objective. This is especially critical for the goods movement system. The development of a world-class, zero- or near-zero- emission freight transportation system is necessary to maintain economic growth in the region, to sustain quality of life, and to meet federal air quality requirements. The 2016–2040 RTP/SCS puts forth an aggressive strategy for technology development and deployment to achieve this objective. This strategy will have many co-benefits, including energy security, cost certainty, increased public support for infrastructure, GHG emissions reduction, and economic development.

The 2016–2040 RTP/SCS provides a blueprint for improving quality of life for residents by providing choices for where they will live, work, and play, and how they will move around. It is designed to promote

safe, secure, and efficient transportation systems to provide improved access to opportunities, such as jobs, education, and healthcare. Its emphasis on transit and active transportation is designed to allow residents to lead a healthier, more active lifestyle. Its goal is to create jobs, ensure the region's economic competitiveness through strategic investments in the goods movement system, and improve environmental and health outcomes for its residents by 2040. More importantly, the 2016–2040 RTP/SCS is also designed to preserve what makes the region special, including stable and successful neighborhoods and array of open spaces for future generations.

The 2016–2040 RTP/SCS also includes examples of measures that could reduce impacts from planning, development, and transportation. It notes, however, that the example measures are not intended to serve as any kind of checklist to be used on a project-specific basis. Since every project and project setting is different, project-specific analysis is needed to identify applicable and feasible mitigation. These mitigation measures are particularly important where streamlining mechanisms under SB 375 are utilized.

A detailed discussion of the Project's consistency with the 2016–2040 RTP/SCS is included in Section III, SCEA Criteria and Transit Priority Project Consistency Analysis. As discussed there, the Project would be substantially consistent with the applicable 2016–2040 RTP/SCS policies and with the land use designation, density, and building intensity identified in the 2016–2040 RTP/SCS for the area in which the Project Sites are located. Additionally, as discussed below in Section VI.14, the Project's housing, population, and employee estimates would be consistent with SCAG growth projections. Therefore, no significant impacts regarding consistency with this plan would occur.

# Local Plans, Policies, Regulations

The discussion below provides a discussion of the plans, policies, and regulations established by the City of Los Angeles.

### Los Angeles General Plan

The City's General Plan serves as a blueprint for the future, prescribing policy goals and objectives to shape and guide the physical development of the City. In the State of California, all cities are required to develop a General Plan. A General Plan is a comprehensive policy document that informs future land use decisions. It establishes land use designations and policies that identify a range of <u>zoning</u> options that can be applied to property. These policies assist <u>decision makers</u> as they review <u>planning approvals</u> for a new project or consider a <u>proposed ordinance</u> or policy. By identifying land use categories and corresponding zones, the General Plan provides the foundational guide for planning, outlining how land is used and how the City allocates its resources. The General Plan is, however, more than just the legal basis for all local land use decisions; it is the vision for how the City will evolve, reflecting the values and priorities of its communities. The following provides a discussion of the Project's consistency with elements of the General Plan.

### General Plan Framework Element

Adopted in December 1996, and readopted in August 2001, the City of Los Angeles General Plan Framework Element (General Plan Framework) establishes the conceptual basis for the City's General Plan.<sup>52</sup> The General Plan Framework is one of the General Plan Elements and sets forth a citywide comprehensive long-range growth strategy and defines Citywide policies regarding land use, housing, urban form, neighborhood design, open space and conservation, economic development, transportation,

<sup>&</sup>lt;sup>52</sup> City of Los Angeles Framework Element of the General Plan, website: https://planning.lacity.org/cwd/framwk/fwhome0.htm, accessed: August 2019.

infrastructure, and public services. General Plan Framework land use policies are further guided at the community level through community plans and specific plans. The General Plan Framework sets forth a conceptual relationship between land use and transportation and encourages new development to be developed near transit. The Framework Element also calls for commercial development along the City's arterial corridors to be intensified with new projects that integrate commercial and residential uses.

The consistency of the Project with applicable objectives and policies in the General Plan Framework is presented in Table VI-11, Project Consistency with Applicable Objectives of the Framework Element. As shown, the Project would be consistent with the applicable objectives in the General Plan Framework and impacts related to consistency with this document would be less than significant.

<b>Objective/Policy</b> <sup>a</sup>	Project Consistency
Land Use Chapter	
<b>Objective 3.1:</b> Accommodate a diversity of uses that support the needs of the City's existing and future residents, businesses, and visitors.	<b>Consistent.</b> The Project would develop a mixed-use building with affordable residential units and ground floor commercial space which would contribute to the diversity of land uses in the area, and would support the needs of the City's existing and future residents, businesses, and visitors.
<b>Objective 3.2:</b> To provide for the spatial distribution of development that promotes an improved quality of life by facilitating a reduction of vehicle trips, vehicle miles traveled, and air pollution.	<b>Consistent.</b> The Project Site is located within a TPA and would be incorporated into the Metro Soto Station Plaza which provides service for the Metro Gold Line. Moreover, the Project is served by Metro bus lines 30/330, 68, 106, 251, 252, 605, 751, and 770, and Montebello bus line 40. The Project would also include 66 bicycle parking spaces including 54 long term spaces and 12 short term spaces. As such, the Project would support the reduction of vehicle trips, vehicle miles travelled, and air pollution.
<b>Objective 3.4:</b> Encourage new multi-family residential, retail commercial, and office development in the City's neighborhood districts, community, regional, and downtown centers as well as along primary transit corridors/boulevards, while at the same time conserving existing neighborhoods and related districts.	<b>Consistent.</b> The Project would provide a mixed-use development with affordable residential units and ground floor commercial space consistent with existing land uses in the Boyle Heights Community Plan area, which includes a mix of commercial, residential, and office land uses. The Project would provide housing on a site that is currently vacant. The Project would also help to revitalize the area that is now along a transit corridor.
<b>Objective 3.15:</b> Focus mixed commercial/residential uses, neighborhood-oriented retail, employment opportunities, and civic and quasi-public uses around urban transit stations, while protecting and preserving surrounding low-density neighborhoods from the encroachment of incompatible land uses.	<b>Consistent.</b> The Project would provide a mixed-use development with affordable residential units and ground floor commercial space within a TPA, and would be incorporated into the Metro Soto Station Plaza which provides service for the Metro Gold Line. Moreover, the Project is served by Metro bus lines 30/330, 68, 106, 251, 252, 605, 751, and 770, and Montebello bus line 40. The Project would not encroach on low-density neighborhoods.
<b>Objective 3.17:</b> Accommodate land uses, locate and design buildings, and implement streetscape amenities that enhance pedestrian activity.	<b>Consistent.</b> The Project would provide ground floor commercial uses within the Metro Soto Station Plaza, which would enhance pedestrian activity.

 Table VI-11

 Project Consistency with Applicable Objectives of the Framework Element

Table VI-11
Project Consistency with Applicable Objectives of the Framework Element

<b>Objective/Policy</b> <sup>a</sup>	Project Consistency		
Housing Chapter			
<b>Objective 4.2</b> : Encourage the location of new multi- family housing development to occur in proximity to transit stations, along some transit corridors, and within some high activity areas with adequate transitions and buffers between higher-density developments and surrounding lower-density residential neighborhoods.	<b>Consistent.</b> The Project would provide a mixed-use development with affordable residential units and ground floor commercial space within a TPA, and would be incorporated into the Metro Soto Station Plaza which provides service for the Metro Gold Line. Moreover, the Project is served by Metro bus lines 30/330, 68, 106, 251, 252, 605, 751, and 770, and Montebello bus line 40.		
Urban Form and Neighborhood Design Chapter			
<b>Objective 5.2</b> : Encourage future development in centers and in nodes along corridors that are served by transit and are already functioning as centers for the surrounding neighborhoods, the community, or the region.	<b>Consistent.</b> The Project would provide a mixed-use development with affordable residential units and ground floor commercial space within a TPA, and would be incorporated into the Metro Soto Station Plaza which provides service for the Metro Gold Line. Moreover, the Project is served by Metro bus lines 30/330, 68, 106, 251, 252, 605, 751, and 770, and Montebello bus line 40.		
Economic Development Chapter			
<b>Objective 7.2:</b> Establish a balance of land uses that provides for commercial and industrial development which meets the needs of local residents, sustains economic growth, and assures maximum feasible environmental quality.	<b>Consistent.</b> The Project would provide ground floor commercial uses along with residential uses which would serve to establish a balance of commercial development.		
<sup>a</sup> City of Los Angeles, Citywide General Plan Framework Element, readopted August 2001.			

# Boyle Heights Community Plan

The City of Los Angeles contains 35 community plans which comprise the Land Use Element of the General Plan, and the Boyle Heights Community Plan is one of those plans, which the Project Site is located in. The community plans are intended to promote an arrangement of land uses, streets, and services, which would encourage and contribute to the economic, social, and physical health, safety, and welfare of the people who live and work in the community. The community plans are also intended to guide development in order to create a healthful and pleasing environment. The community plans coordinate development among the various communities of the City and adjacent municipalities in a fashion both beneficial and desirable to the residents of the community. The Boyle Heights Community Plan guides land uses on the Project Site and in the surrounding areas within the Boyle Heights Community Plan Area. This current Community Plan sets forth planning goals and objectives to maintain the community's distinctive character.

The Project's consistency with the applicable objectives and policies of the Boyle Heights Community Plan is presented in Table VI-12, Project Consistency with the Boyle Heights Community Plan. The Project Applicant is requesting a General Plan Amendment (GPA) per Los Angeles Municipal Code (LAMC) Section 11.5.6 to change the Land Use Designation from Low Medium II to Highway Oriented Commercial/Limited Commercial. Although the Applicant is requesting this GPA, this change would not substantially affect land use consistency in the Boyle Heights Community Plan Area, as the Project parcels are designated for commercial and residential uses and are proposed for these uses. Further, this GPA would be consistent the land use goals and intent of the Boyle Heights Community Plan Area, which encourages increased provision of residential uses in multi-story buildings along the corridors while preserving ground floor spaces for neighborhood serving commercial uses. As shown in Table VI-12, the Project would be consistent with the applicable objectives and policies and impacts related to consistency with this plan would be less than significant.

<b>Objective/Policy</b> <sup>a</sup>	Project Consistency		
Residential			
<b>Objective 2:</b> Provide new housing opportunities that accommodate a range of income needs, provide public amenities, and maximize the opportunities for individual choice.	<b>Consistent.</b> The Project would provide a mixed-use development with affordable residential units and ground floor commercial space on a currently vacant portion of the site.		
<b>Policy 4:</b> Medium density housing be located near commercial corridors where access to public transportation and shopping services is convenient and where a buffer from, or a transition between, low-density housing can be achieved to the extent feasible	<b>Consistent.</b> The Project would provide a mixed-use development with affordable residential units and ground floor commercial space within a TPA, and would be incorporated into the Metro Soto Station Plaza which provides service for the Metro Gold Line. Moreover, the Project is served by Metro bus lines 30/330, 68, 106, 251, 252, 605, 751, and 770, and Montebello bus line 40. The Project would not encroach on low-density neighborhoods.		
Commercial			
<b>Objective 1:</b> Conserve and strengthen viable commercial development in the Community and to provide additional opportunities for new commercial development and services.	<b>Consistent.</b> The Project would include ground floor commercial uses that would serve the Project community and the Metro Soto Station Plaza.		
<b>Objective 2:</b> To provide a range of commercial facilities at various locations to accommodate the shopping needs of residents, including persons of restricted mobility, and to provide increased employment opportunities within the Community.	<b>Consistent.</b> The Project would include ground floor commercial uses that would increase employment opportunities. Additionally, the Project would be incorporated into the Metro Soto Station Plaza which provides service for the Metro Gold Line. Moreover, the Project is served by Metro bus lines 30/330, 68, 106, 251, 252, 605, 751, and 770, and Montebello bus line 40.		
<b>Objective 4:</b> To improve the compatibility between commercial and residential uses.	<b>Consistent.</b> The Project would include both residential and commercial uses and would be located near numerous transit opportunities.		
<b>Policy 5:</b> That neighborhood markets and retail and service establishments oriented to the residents be retained throughout the Community, within walking distance of residents.	<b>Consistent.</b> The Project would provide a mixed-use development with affordable residential units and ground floor commercial space. These uses would be within walking distance of existing residential and commercial uses as well as the Metro Soto Station Plaza.		

 Table VI-12

 Project Consistency with the Boyle Heights Community Plan

# Los Angeles General Plan Housing Element

The Housing Element of the General Plan is prepared and updated pursuant to State law and provides planning guidance in meeting the housing needs identified in SCAG's RHNA.<sup>53</sup> The Housing Element identifies the City's housing conditions and needs, establishes the goals, objectives, and policies that are the foundation of the City's housing and growth strategy, and provides the array of programs the City intends to implement to create sustainable, mixed-income neighborhoods. The 2013–2021 Housing Element, an update to the previous 2006–2014 Housing Element that is based on the updated 2012 RHNA, was adopted by the City Council on December 3, 2013. Policies of note include Policy 1.1.3, which states the City should "[f]acilitate new construction and preservation of a range of housing types that address the particular needs of the city's households." Also, Policy 1.1.4 states that the City should "[e]xpand opportunities for residential development, particularly in designated Centers, Transit Oriented Districts and along Mixed-Use Boulevards." The Housing Element carries forward the goals of the Framework Element Housing chapter to encourage infill development and increase density in higher-intensity commercial and mixed-use districts, centers and boulevards, and in proximity to transit.

The Housing Element encourages new construction of a range of different housing types that address the needs of the City's households. Chapter 1, Housing Needs Assessment, identifies the City's share of the housing needs established in the RHNA. In particular, Table 1.29, City of Los Angeles Regional Housing Needs Assessment Allocation, indicates that the City's needs assessment allocation includes 82,002 housing units of which 35,412 units, or 43.2 percent, would be for above moderate-income households.

The remaining 56.8 percent of the needed housing units consist of 13,728 moderate-income units (16.8 percent), 12,435 low-income units (15.2 percent), 10,213 very-low-income units (12.5 percent), and 10,213 extremely-low-income units (12.5 percent).<sup>54</sup>

The Project would improve the Project Site with a new five-story, 64.5-foot high mixed-use affordable housing building consisting 63 affordable units and one market-rate manager's unit, 2,443 square feet of ground floor commercial space, and 50 total automobile parking spaces in a one level subterranean parking garage. Thus, the Project would support meeting the City's RHNA allocations by contributing to both the overall supply of housing as well as contributing to the availability of housing for low income households. The Project would be incorporated into the Metro Soto Station Plaza which provides service for the Metro Gold Line. Moreover, the Project is served by Metro bus lines 30/330, 68, 106, 251, 252, 605, 751, and 770, and Montebello bus line 40.

Therefore, the Project would be substantially consistent with the Los Angeles General Plan Housing Element and impacts would be less than significant.

# City of Los Angeles Mobility Plan 2035

Mobility Plan 2035 (Mobility Plan),<sup>55</sup> which was adopted in January 2016, is a comprehensive update of the Transportation Element, which in part includes the City's classification system for roadways. The Mobility Plan provides revised street standards in an effort to provide a more enhanced balance between

<sup>&</sup>lt;sup>53</sup> City of Los Angeles 2013-2021 Housing Element, website: https://planning.lacity.org/HousingInitiatives/HousingElement/TOCHousingElement.htm, accessed: August 2019.

<sup>&</sup>lt;sup>54</sup> Ibid.

<sup>&</sup>lt;sup>55</sup> City of Los Angeles Mobility Plan 2035 An Element of the General Plan, website: https://planning.lacity.org/documents/policy/mobilitypInmemo.pdf, accessed: August 2019.

traffic flow and other important street functions, including transit routes and stops, pedestrian environments, bicycle routes, building design, and site access. Various modes of travel are encouraged by the Mobility Plan, including walking, biking and using public transit. Key objectives within the Mobility Plan are as follows:

**Policy 2.3:** Recognize walking as a component of every trip, and ensure high-quality pedestrian access in all site planning and public right-of-way modifications to provide a safe and comfortable walking environment.

**Policy 3.1:** Recognize all modes of travel, including pedestrian, bicycle, transit and vehicular modes including goods movement as integral components of the City's transportation system.

**Policy 3.3:** Promote equitable land use decisions that result in fewer vehicle trips by providing greater proximity and access to jobs, destinations, and other neighborhood services.

**Policy 3.4:** Provide all residents, workers and visitors with affordable, efficient, convenient and attractive transit services.

**Policy 3.8:** Provide bicyclists with convenient, secure and well-maintained bicycle parking facilities.

**Policy 4.13:** Balance on-street and off-street parking supply with other transportation and land use objectives.

**Policy 5.2**: Support ways to reduce vehicle miles traveled (VMT) per capita.

**Policy 5.4:** Continue to encourage the adoption of low and zero emission fuel sources, new mobility technologies, and supporting infrastructure.

The Project would support the Mobility Plan policies listed above as it promotes a balanced transportation system by locating a mixed-use, affordable housing project on an urban infill site located in an area that has an existing mix of commercial, residential, office, and educational uses. The Project Site is also located within a TPA and would be incorporated into the Metro Soto Station Plaza which provides service for the Metro Gold Line. Moreover, the Project is served by Metro bus lines 30/330, 68, 106, 251, 252, 605, 751, and 770, and Montebello bus line 40. The Project encourages pedestrian and bicycle activity by locating new residents, employees and visitors in close proximity to public transit and services. Project residents, employees and visitors in close proximity to public transit and services and visitors and services in the surrounding neighborhood and nearby centers such as Downtown Los Angeles.

The Project would include 66 bicycle parking spaces including 54 long term spaces and 12 short term spaces, adhering to the Code requirements for bicycle parking. As such, the Project would provide convenient, secure and well-maintained bicycle parking facilities that would encourage the use of bicycles by Project residents and visitors and a reduction in the use of vehicular travel. Because the Project would be consistent with these applicable policies of the Mobility Plan, impacts would be less than significant.

# City of Los Angeles Zoning Code

The City of Los Angeles Zoning Code (Chapter 1 of the LAMC) regulates development through zoning designations and development standards. The Zoning Code establishes objective zoning and development standards, but was not adopted to avoid or mitigate environmental impacts. A brief discussion of the Project's consistency with the Zoning Code is provided below.

The LAMC establishes the zoning for the four parcels along 1<sup>st</sup> Street as C2-1-CUGU (Commercial Zone with a Clean Up Green Up (CUGU) overlay and the two southern parcels fronting Soto Street as RD-1.5-1-CUGU (Restricted Density Multiple Dwelling Zone, Height District 1 with a Clean Up Green Up (CUGU) overlay). The Project Applicant is requesting a JJJ complaint Vesting Zone Change per LAMC Section 12.32(Q) from C2-1-CUGU and RD1.5-1-CUGU to [T][Q]C2-1-CUGU.

The RD-1.5 zone allows for multi-family dwellings; however, the Project includes commercial development that is not a permitted use in the RD zone. The Project Site is in transit-rich and pedestrian accessible locations with connectivity to many areas in the City. The Project would encourage the use of mass transit, walking and bicycling since the Project would locate mixed-use residential and commercial development on a site that is located near numerous bus lines, a Metro Rail Station, and bike lanes, which is consistent with City and region-wide goals and strategies. As concluded throughout this SCEA analysis, the Project would not result in significant environment impacts; therefore, the commercial portion of the Project would not result in conflicts with surrounding land uses. Upon approval of the proposed zone change, the Project would be consistent with applicable zoning, and potential impacts would be less than significant.

# **Cumulative Impacts**

**Less Than Significant Impact.** With respect to community division, it is unknown whether or not any of the related projects or other development in the Community Plan Area would divide an existing community. However, as the Project would have no impact with respect to community division and habitat conservation plans, it would not contribute to a cumulative impact.

Development of the related projects is expected to occur in accordance with adopted plans and regulations. It is also reasonably anticipated that most of the related projects would be compatible with the zoning and land use designations of each related project site and its existing surrounding uses. In addition, it is reasonable to assume that the related projects under consideration in the surrounding area would implement and support local and regional planning goals and policies. Therefore, cumulative land use impacts would be less than significant.

# **12.** MINERAL RESOURCES

# a) Would the project Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

**No Impact.** Based on a review of the California Division of Oil, Gas and Geothermal Resources (DOGGR) Oil and Gas Well Finder, the Project Site is located within the Boyle Heights (ABD) Oil Field.<sup>56</sup> However, no oil wells are present on site.<sup>57</sup> Additionally, the Project Site is not within a surface mining district or Mineral Resource Zone (MRZ) identified as having potential significant mineral deposits (such as MRZ-2) which is classified as areas that contain identified mineral resources.<sup>58</sup> The Project would not affect ongoing extraction activities and there would be no impact on existing or future regionally important mineral extraction sites. The Project would not involve mineral extraction activities, nor are any such activities

<sup>&</sup>lt;sup>56</sup> California Department of Conservation, Division of Oil, Gas and Geothermal Resources, Well Finder, website: https://maps.conservation.ca.gov/doggr/wellfinder, accessed: August 2019.

<sup>57</sup> Ibid.

<sup>&</sup>lt;sup>58</sup> City of Los Angeles Department of City Planning, Los Angeles City General Plan Conservation Element, Exhibit A, Mineral Resources, Adopted September 2001.

presently occurring on the Project Site. Therefore, no impact would occur and no mitigation measures are required.

# b) Would the project Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

**No Impact.** As mentioned previously, there are no oil extraction operations and drilling or mining of mineral resources at the Project Site, nor is the Project Site within a surface mining district or MRZ-2 zone. Therefore, development of the Project would not result in the loss of availability of a mineral resource that would be of value to the residents of the State or a locally-important mineral resource, or mineral resource recovery site, as delineated on a local general plan, specific plan, or land use plan. Therefore, no impact would occur and no mitigation measures are required.

# **Cumulative Impacts**

**Less Than Significant Impact.** It is unknown whether or not any of the related project sites contain mineral resources. However, as the Project would have no impact on mineral resources, it would not contribute to a cumulative impact. Therefore, there would be no cumulative impact on mineral resources and no mitigation measures are required.

# 13. NOISE

The following analysis utilizes information provided in the *Air Quality and Noise Analyses, Los Lirios Mixed-Use Project*, prepared by Pomeroy Environmental Services, April 2019 (Air Quality and Noise Report). The Air Quality and Noise Report is available as Appendix C.

a) Would the project result in the Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less Than Significant Impact.

### **Construction Noise**

Construction-related noise impacts would be significant if, as indicated in LAMC Section 112.05, noise from construction equipment within 500 feet of a residential zone exceeds 75 dBA at a distance of 50 feet from the noise source. However, the above noise limitation does not apply where compliance is technically infeasible. Technically infeasible means that the above noise limitation cannot be complied with despite the use of mufflers, shields, sound barriers and/or any other noise reduction device or techniques during the operation of the equipment.

Construction of the Project would require the use of heavy equipment for grading foundation preparation, the installation of utilities, and building construction. During each construction phase there would be a different mix of equipment operating and noise levels would vary based on the amount of equipment in operation and the location of each activity.

The U.S. Environmental Protection Agency (EPA) has compiled data regarding the noise generating characteristics of specific types of construction equipment and typical construction activities. The data pertaining to the types of construction equipment and activities that would occur at the Project Site are presented in Table VI-13, Noise Range of Typical Construction Equipment, and Table VI-14, Estimated

Project Construction Noise Levels, respectively, at a distance of 50 feet from the noise source (i.e., reference distance).

The noise levels shown in Table VI-14 represent composite noise levels associated with the construction activities that will be carried out by the Project, which take into account both the number of pieces and spacing of heavy construction equipment that are typically used during each phase of construction in a development such as the Project. As shown in Table VI-14, construction noise during the heavier initial periods of construction is presented as 86 dBA Leq when measured at a reference distance of 50 feet from the center of construction activity. These noise levels would diminish rapidly with distance from the construction site at a rate of approximately 6 dBA per doubling of distance. For example, a noise level of 84 dBA Leg measured at 50 feet from the noise source to the receptor would reduce to 78 dBA Leg at 100 feet from the source to the receptor, and reduce by another 6 dBA Leq to 72 dBA Leq at 200 feet from the source to the receptor.

Construction Equipment	Noise Level in dBA Leq at 50 Feet <sup>a</sup>		
Front Loader	73-86		
Trucks	82-95		
Cranes (moveable)	75-88		
Cranes (derrick)	86-89		
Vibrator	68-82		
Saws	72-82		
Pneumatic Impact Equipment	83-88		
Jackhammers	81-98		
Pumps	68-72		
Generators	71-83		
Compressors	75-87		
Concrete Mixers	75-88		
Concrete Pumps	81-85		
Backhoe	73-95		
Tractor	77-98		
Scraper/Grader	80-93		
Paver	85-88		
<sup>a</sup> Machinery equipped with noise control devices or other noise-reducing design features does not			

Table VI-13 **Noise Range of Typical Construction Equipment** 

Source: United States Environmental Protection Agency, Noise from Construction Equipment and Operations, Building Equipment and Home Appliances, PB 206717, 1971.

Construction Phase	Noise Levels at 50 Feet with Mufflers (dBA Leq)	Noise Levels at 60 Feet with Mufflers (dBA Leq)	Noise Levels at 100 Feet with Mufflers (dBA Leq)	Noise Levels at 200 Feet with Mufflers (dBA Leq)
Ground Clearing	82	80	76	70
Excavation, Grading	86	84	80	74
Foundations	77	75	71	65
Structural	83	81	77	71
Finishing	86	84	80	74
Source: United States Environmental Protection Agency, Noise from Construction Equipment and Operations, Building Equipment and Home Appliances, PB 206717, 1971.				

Table VI-14Estimated Project Construction Noise Levels

To identify the existing ambient noise levels in the general vicinity of the Project Site, noise measurements were taken with a 3M SoundPro SP DL-1 sound level meter, which conforms to industry standards set forth in ANSI S1.4-1983 (R2006) – Specification for Sound Level Meters/Type 1.<sup>59</sup> The measured noise levels are shown in Table VI-15, Existing Ambient Daytime Noise Levels. See Appendix C for locations of sensitive receptors. The nearest noise sensitive receptors to the Project Site are:

- adjacent residences to the south;
- residences to the west (20 feet);
- residences to the east (85 feet);
- historic use to the east (87 feet);
- residences to the north (150 feet);
- church use to the east (300 feet);
- church use to the southwest (330 feet);
- library to the west (445 feet);and
- school use to the southwest (480 feet).

<sup>&</sup>lt;sup>59</sup> This noise meter meets the requirement specified in LAMC Section 111.01(I) that the instruments be "Type S2A" standard instruments or better. This instrument was calibrated and operated according to the manufacturer's written specifications. At the measurement sites, the microphone was placed at a height of approximately five feet above grade.

			Noise Levels <sup>a</sup>		
No.	Location	Primary Noise Sources	L <sub>eq</sub>	Lmax	Lmin
1	East frontage of the Project Site along S. Soto Street, near residential receptors.	Traffic, pedestrian, and residential activity along S. Soto Street.	68.8	81.4	53.7
2	North of the Project Site along E. 1 <sup>st</sup> Street.	Traffic and pedestrian activity along E 1 <sup>st</sup> Street.	66.7	75.8	57.2
2	Southwest from the Project Site along S. Breed Street, near church and school sensitive receptors.	Traffic, pedestrian, residential, and school activity along Breed Street.	61.0	79.1	49.2
See Appendix C for noise data sheets.					

Table VI-15 Existing Ambient Daytime Noise Levels

Due to the use of construction equipment during the construction phase, the Project would expose surrounding off-site receptors to increased ambient exterior noise levels comparable to those previously listed above in Table VI-14. Specifically, based on the data provided in Table VI-14, construction noise levels at the residences within 50 feet could reach 86 dBA compared to the existing measured noise levels of 68.8, 66.7, dBA and 61.0 dBA for the area. It should be noted, however, that any increase in noise levels at off-site receptors during construction of the Project would be temporary in nature, and would not generate continuously high noise levels, although occasional single-event disturbances from construction are possible. In addition, the construction noise during the heavier initial periods of construction (i.e., foundation work) would typically be reduced in the later construction phases (i.e., interior building construction at the proposed building) as the physical structure of the proposed structure would break the line-of-sight noise transmission from the construction area to the nearby sensitive receptors.

Similar to other development projects in the City, the Project would comply with the City's existing noise regulations to ensure noise impacts would be less than significant. LAMC Section 41.40 regulates noise from construction activities. Exterior construction activities that generate noise are prohibited between the hours of 9:00 P.M. and 7:00 A.M. Monday through Friday, and between 6:00 P.M. and 8:00 A.M. on Saturday.<sup>60</sup> The construction activities associated with the Project would comply with these LAMC requirements. In addition, pursuant to LAMC Section 112.05, compliance with construction noise standards is achieved if all technically feasible noise reduction measures are implemented. According to the LAMC, technically infeasible means that the above noise limitation cannot be complied with despite the use of mufflers, shields, sound barriers and/or any other noise reduction device or techniques during the operation of the equipment.<sup>61</sup> Although the estimated construction-related noise levels associated with the Project could periodically exceed the numerical noise threshold of 75 dBA at 50 feet from the noise source as outlined in LAMC Section 112.05, the Project would implement all technically feasible reduction measures in compliance with the standards set forth in LAMC Section 112.05 (see RCM NOI-1 through RCM NOI-7 below).

<sup>&</sup>lt;sup>60</sup> Los Angeles Municipal Code, Section 41.40.

<sup>&</sup>lt;sup>61</sup> Los Angeles Municipal Code, Section 112.05.

Specifically, the use of barriers such as plywood structures, flexible sound control curtains, or intervening construction trailers, could reduce line-of-sight noise levels by approximately 10 dbA.<sup>62</sup> And, with the incorporation of the LAMC-required noise reduction techniques, construction noise levels could be reduced by up to approximately 20 dBA.<sup>63</sup> As previously stated, construction noise levels could reach up to approximately 86 dBA Leq. However, with the reduction of approximately 20 dBA per code-required noise reduction techniques (see RCM NOI-1 through RCM NOI-7), the resulting construction noise levels would be reduced to approximately 66 dBA Leq. These noise levels would not exceed the noise threshold of 75 dBA at 50 feet from the noise source as outlined in LAMC Section 112.05. With the code-required reduced construction noise of 66 dBA, the construction noise levels would be substantially similar (and potentially less than), the existing ambient noise in the heavily urbanized location.

Thus, based on the provisions set forth in LAMC 112.05, implementation of the following regulatory compliance measures would ensure the Project be consistent with, and not violate the provisions of, the LAMC. Thus, the Project would comply with the City's existing noise regulations to ensure construction noise impacts would be less than significant. The regulatory compliance measures per LAMC 41.40 and 112.05 would include the following regulatory compliance measures.

### Regulatory Compliance Measures

- **RCM NOI-1** The Project shall comply with the City of Los Angeles Noise Ordinance No. 144,331 and 161,574 (see LAMC Section 112.05), and any subsequent ordinances, which prohibit the emission or creation of noise beyond certain levels.
- **RCM NOI-2** Construction shall be restricted to the hours of 7:00 AM to 9:00 PM Monday through Friday, and 8:00 AM to 6:00 PM on Saturday.
- **RCM NOI-3** Construction activities shall be scheduled so as to avoid operating several pieces of equipment simultaneously, which causes high noise levels.
- **RCM NOI-4** Noise-generating equipment operated at the Project Site shall be equipped with the most effective and technologically feasible noise control devices, such as mufflers, lagging (enclosures for exhaust pipes), and/or motor enclosures. All equipment shall be properly maintained to assure that no additional noise, due to worn or improperly maintained parts, would be generated.
- **RCM NOI-5** Noise and groundborne vibration construction activities whose specific location on the site may be flexible (e.g., operation of compressors and generators, cement mixing, general truck idling) shall be conducted as far as possible from the nearest noise- and vibration-sensitive land uses, and natural and/or manmade barriers (e.g., intervening

<sup>&</sup>lt;sup>62</sup> Based on a review of Table 4 of the FHWA Noise Barrier Design Handbook (July 14, 2011), the design feasibility of a sound barrier that reduces noise by 5 dBA is considered "simple" and a reduction of up to 10 dBA as "attainable." And, reductions of 15 and 20 dBA are considered "very difficult" and "nearly impossible," respectively.

<sup>&</sup>lt;sup>63</sup> Estimate based on information from the United States Environmental Protection Agency, Noise from Construction Equipment and Operations, Building Equipment and Home Appliances, PB 206717, 1971. Per Table V, Noise Control For Construction Equipment therein, use of improved mufflers/silencers would achieve approximately 10 dBA reduction and enclosures/barriers blocking line-of-sight would achieve approximately 10 dBA reduction. While the additional measures would reduce noise, it should be noted that all reductions would not be wholly additive, but would be incremental, and therefore have conservatively not been quantified in the estimated reduction.

construction trailers) shall be used to screen propagation of noise from such activities towards these land uses to the maximum extent possible.

- **RCM NOI-6** Barriers such as, but not limited to, plywood structures or flexible sound control curtains shall be erected around the perimeter of the construction site, and around stationary equipment as feasible (i.e., generators, air compressors, etc.), to minimize the amount of noise during construction on the nearby noise-sensitive uses. Perimeter barriers shall be at least 8 feet in height and constructed of materials achieving a Transmission Loss (TL) value of at least 20 dBA, such as ½ inch plywood.<sup>64</sup>
- **RCM NOI-7** The Project shall comply with the City of Los Angeles Building Regulations Ordinance No. 178,048 (see LAMC Section 91.106.4.8), which requires a construction site notice to be provided that includes the following information: job site address, permit number, name and phone number of the contractor and owner or owner's agent, hours of construction allowed by code or any discretionary approval for the site, and City telephone numbers where violations can be reported. The notice shall be posted and maintained at the construction site prior to the start of construction and displayed in a location that is readily visible to the public.

# **Operational Noise**

A significant impact may occur if the Project were to result in a substantial permanent increase in ambient noise levels above existing ambient noise levels without the Project. A project would normally have a significant impact on noise levels from project operations if the project causes the ambient noise level measured at the property line of affected uses that are shown in Table VI-16, Community Noise Exposure (CNEL), to increase by 3 dBA in CNEL to or within the "normally unacceptable" or "clearly unacceptable" category, or any 5 dBA or greater noise increase.

As such, a significant impact would occur if noise levels associated with operation of the Project would increase the ambient noise levels by 3 dBA CNEL at homes where the resulting noise level would be at least 70 dBA CNEL. In addition, any long-term increase of 5 dBA CNEL or more is considered to cause a significant impact. Generally, in order to achieve a 3 dBA CNEL increase in ambient noise from traffic, the volume on any given roadway would need to double. In addition to analyzing potential impacts in terms of CNEL, the analysis also addresses increases in on-site noise sources per the provisions of the LAMC, which establishes a Leq standard of 5 dBA over ambient conditions as constituting a LAMC violation.

<sup>&</sup>lt;sup>64</sup> Based on the FHWA Noise Barrier Design Handbook (July 14, 2011), see Table 3, Approximate sound transmission loss values for common materials.
Land Use	Normally Acceptable <sup>a</sup>	Conditionally Acceptable <sup>b</sup>	Normally Unacceptable <sup>c</sup>	Clearly Unacceptable <sup>d</sup>
Single-family, Duplex, Mobile Homes	50 - 60	55 - 70	70 - 75	above 75
Multi-Family Homes	50 - 65	60 - 70	70 - 75	above 75
Schools, Libraries, Churches, Hospitals, Nursing Homes	50 - 70	60 - 70	70 - 80	above 80
Transient Lodging – Motels, Hotels	50 - 65	60 - 70	70 - 80	above 75
Auditoriums, Concert Halls, Amphitheaters		50 - 70		above 70
Sports Arena, Outdoor Spectator Sports		50 - 75		above 75
Playgrounds, Neighborhood Parks	50 - 70		67 - 75	above 75
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50 - 75		70 - 80	above 80
Office Buildings, Business and Professional Commercial	50 - 70	67 - 77	above 75	
Industrial, Manufacturing, Utilities, Agriculture	50 - 75	70 - 80	above 75	

Table VI-16 Community Noise Exposure

<sup>a</sup> Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.

<sup>b</sup> Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

<sup>c</sup> Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

<sup>d</sup> Clearly Unacceptable: New construction or development should generally not be undertaken.

Source: Office of Planning and Research, State of California Genera Plan Guidelines, October 2003 (in coordination with the California Department of Health Services); City of Los Angeles, General Plan Noise Element, adopted February 1999.

#### Traffic Noise

In order for a new noise source to be audible, there would need to be a 3 dBA or greater CNEL noise increase. As discussed above, the traffic volume on any given roadway would need to double in order for a 3 dBA increase in ambient noise to occur. According to the L.A. CEQA Thresholds Guide, if a project would result in traffic that is less than double the existing traffic, then the project's mobile noise impacts are assumed to be less than significant. As detailed in the Transportation Study, the Project is estimated to add 496 daily trips, including 48 morning peak hour trips and 41 afternoon peak hour trips to a highly developed area of the City that is already impacted by heavy traffic noise. Moreover, the highest Project-related trip increase would occur at intersection number 3 (S. Soto Street and E. 1<sup>st</sup> Street) during the AM peak hour with 36 peak hour trips. When compared to the existing 2,837 vehicle trips occurring at

intersection number 3 during the AM peak hour, it is clear that the Project would not double the traffic volumes on any roadway segment in the vicinity of the Project Site. As such, the Project would not increase roadway noise levels by 3 dBA and, thus, traffic noise impacts would be less than significant.

#### **Stationary Noise Sources**

New stationary sources of noise, such as mechanical HVAC equipment would be installed. The design of this equipment would comply with LAMC Section 112.02, which prohibits noise from air conditioning, refrigeration, heating, pumping, and filtering equipment from exceeding the ambient noise level on the premises of other occupied properties by more than five decibels. Thus, because the noise levels generated by the HVAC equipment serving the Project would not be allowed to exceed the ambient noise level by five decibels on the premises of the adjacent properties, a substantial permanent increase in noise levels would not occur at the nearby sensitive receptors. This impact would be less than significant.

#### Parking Noise

Noise would be generated by activities within the proposed subterranean parking garage. Sources of noise would include engines accelerating, doors slamming, car alarms, and people talking. Noise levels within the parking area would fluctuate with the amount of automobile and human activity. It is anticipated that parking related noise would be less than the existing street parking noise as the Project proposes enclosed parking which would reduce noise impacts to off-site uses. In addition, parking-related noise generated by motor driven vehicles within and around the Project Site is regulated under the LAMC. Specifically, with regard to motor-driven vehicles, LAMC Section 114.02 prohibits the operation of any motor-driven vehicles upon any property within the City such that the created noise would cause the noise level on the premises of any occupied residential property to exceed the ambient noise level by more than five decibels. As such, noise impacts associated with the Project's parking area would be less than significant.

In addition, on-site residences would not be adversely impacted by elevated ambient urban noise levels because the Project would be constructed to meet and exceed Title 24 insulation standards of the California Code of Regulations for residential buildings, which serves to provide an acceptable interior noise environment for sensitive uses. Specifically, as required by Title 24, the Project would be designed and constructed to ensure interior noise levels would be at or below a CNEL of 45 dBA in any habitable room of the project. Given the existing measured noise levels are 68.8, 66.7, dBA and 61.0 dBA for the vicinity, and the approximate 30 dBA exterior-to-interior noise reduction for new residential construction,<sup>65</sup> it is clear that standard construction methods and materials would achieve interior noise levels at or below 45 dBA. As such, impacts associated with interior noise levels at the proposed residences would be less than significant.

# b) Would the project result in the generation of excessive groundborne vibration or groundborne noise levels?

**Less Than Significant Impact.** A significant impact may occur if a project were to generate excessive vibration during construction or operation. Vibration is sound radiated through the ground. Vibration can result from a source (e.g., subway operations, vehicles, machinery equipment, etc.) causing the adjacent ground to move, thereby creating vibration waves that propagate through the soil to the foundations of nearby buildings. This effect is referred to as groundborne vibration. The peak particle velocity (PPV) or

<sup>&</sup>lt;sup>65</sup> Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings requires substantial building insulation and windows which reduces exterior to interior noise transmission.

the root mean square (RMS) velocity is usually used to describe vibration levels. PPV is defined as the maximum instantaneous peak of the vibration level, while RMS is defined as the square root of the average of the squared amplitude of the level. PPV is typically used for evaluating potential building damage, while RMS velocity in decibels (VdB) is typically more suitable for evaluating human response.

The background vibration velocity level in residential areas is usually around 50 VdB. The vibration velocity level threshold of perception for humans is approximately 65 VdB. A vibration velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels for most people. Most perceptible indoor vibration is caused by sources within buildings such as operation of mechanical equipment, movement of people, or the slamming of doors. Typical outdoor sources of perceptible groundborne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the groundborne vibration from traffic is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings.

#### **Construction Vibration**

Construction activities for the Project have the potential to generate low levels of groundborne vibration. The operation of construction equipment generates vibrations that propagate through the ground and diminishes in intensity with distance from the source. Vibration impacts can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, to slight damage of buildings at the highest levels. The construction activities associated with the Project could have an adverse impact on both sensitive structures (i.e., building damage) and populations (i.e., annoyance).

In terms of construction-related impacts on buildings, the City of Los Angeles has not adopted policies or guidelines relative to groundborne vibration. While the Los Angeles County Code (LACC Section 12.08.350) states a presumed perception threshold of 0.01 inch per second RMS, this threshold applies to groundborne vibrations from long-term operational activities, not construction. Consequently, as both the City of Los Angeles and the County of Los Angeles do not have a significance threshold to assess vibration impacts during construction, the Federal Transit Administration (FTA) and California Department of Transportation's (Caltrans) adopted vibration standards for buildings which are used to evaluate potential impacts related to construction. Based on the FTA and Caltrans criteria, construction impacts relative to groundborne vibration would be considered significant if the following were to occur:<sup>66</sup>

- Project construction activities would cause a PPV groundborne vibration level to exceed 0.5 inches per second at any building that is constructed with reinforced-concrete, steel, or timber;
- Project construction activities would cause a PPV groundborne vibration level to exceed 0.3 inches per second at any engineered concrete and masonry buildings;
- Project construction activities would cause a PPV groundborne vibration level to exceed 0.2 inches per second at any non-engineered timber and masonry buildings; or

<sup>&</sup>lt;sup>66</sup> Federal Transit Administration, Transit Noise and Vibration Impact Assessment, May 2006; and California Department of Transportation, Transportation- and Construction –Induced Vibration Guidance Manual, June 2004.

 Project construction activities would cause a PPV ground-borne vibration level to exceed 0.12 inches per second at any historical building or building that is extremely susceptible to vibration damage.

In addition, the City of Los Angeles has not adopted any thresholds associated with human annoyance for groundborne vibration impacts. Therefore, this analysis uses the FTA's vibration impact thresholds for human annoyance. These thresholds include 80 VdB at residences and buildings where people normally sleep (e.g., nearby residences) and 83 VdB at institutional buildings, which includes schools and churches. No thresholds have been adopted or recommended for commercial and office uses. Table VI-17, Vibration Source Levels for Construction Equipment, identifies various PPV and RMS velocity (in VdB) levels for the types of construction equipment that would operate at the Project Site during construction.

		Approximate PPV (in/sec)					Approximate RMS (VdB)						
Faultanent	25	50	60	75 5	100	25 5	50	60	75	100			
Equipment	Feet	Feet	Feet	Feet	Feet	Feet	Feet	Feet	Feet	Feet			
Large Bulldozer	0.089	0.031	0.024	0.017	0.011	87	78	76	73	69			
Caisson Drilling	0.089	0.031	0.024	0.017	0.011	87	78	76	73	69			
Loaded Trucks	0.076	0.027	0.020	0.015	0.010	86	77	75	72	68			
Jackhammer	0.035	0.012	0.009	0.007	0.004	79	70	68	65	61			
Small Bulldozer	0.003	0.001	0.0008	0.0006	0.0004	58	49	47	44	40			
Note: in/sec = inches pe	Note: in/sec = inches per second												
Source: Federal Transit	Administr	ation, Tra	nsit Noise	and Vibrati	ion Impact	Assessme	nt, Final R	eport, 20	06.				

Table VI-17 Vibration Source Levels for Construction Equipment

With respect to construction vibration impacts upon existing off-site structures, a historic Victorian house (i.e., Peabody Werden Duplex) (Receptor 4) is located 87 feet across from the Project Site along S. Soto Street. According to the FTA, ground vibration from construction activities do not often reach the levels that can damage structures.<sup>67</sup> Per the FTA, there are four general building categories: I. Reinforced-concrete, steel or timber (no plaster), II. Engineered concrete and masonry (no plaster), III. Non-engineered timber and masonry buildings, and IV. Buildings extremely susceptible to vibration damage. This analysis conservatively considers Receptor 4 a Category IV building (buildings extremely susceptible to vibration damage). The FTA identifies a 0.12 PPV (in/sec) construction vibration criteria for Category IV. Based on the reference data provided in Table VI-17, worst-case construction vibration levels would be less than 0.015 PPV (in/sec) for receptors located farther than 70 feet from the source. As Receptor 4 is located approximately 87 feet from the Project Site, the construction vibration would not have the potential to exceed the FTA's 0.12 PPV (in/sec) standard for Category IV buildings.

In addition, there are residential uses immediately adjacent to the Project Site. Conservatively, this analysis assumes the adjacent uses best fit under Category III, Non-engineered timber and masonry building. The FTA identifies a 0.20 PPV (in/sec) construction vibration criteria for Category III. Based on the reference data provided in Table VI-17, worst-case construction vibration levels at adjacent locations could have the potential to exceed the FTA's 0.20 PPV (inches per second) construction vibration criteria for Category III. (Non-engineered timber and masonry building). The Project would comply with the City's

<sup>&</sup>lt;sup>67</sup> FTA, Transit Noise and Vibration Impact Assessment, Final Report, 2006, see page 12-10.

existing construction vibration regulations. The Project would implement RCM NOI-8, which would ensure all construction work would be performed in accordance with Section 91.3307.1 (Protection Required) of the LAMC. Specifically, Section 91.3307.1 (Protection Required) states adjoining public and private property shall be protected from damage during construction, remodeling and demolition work.<sup>68</sup> Protection must be provided for footings, foundations, party (i.e., shared) walls, chimneys, skylights, and roofs. Provisions shall be made to control water runoff and erosion during construction activities. For excavations, adjacent property shall be protected as set forth in Section 832 of the Civil Code of California. Prior to the issuance of any permit, which authorizes an excavation where the excavation is to be of a greater depth than are the walls or foundation of any adjoining building or structure and located closer to the property line than the depth of the excavation, the owner of the site shall provide the Department of Building and Safety with evidence that the adjacent property owner or owners have been given a 30day written notice of the intent to excavate. This notice shall state the depth to which the excavation is intended to be made and when the excavation will commence. This notice shall be by certified mail, return receipt requested. The Project would implement RCM NOI-8 (incorporating a structure monitoring program), ensuring the Project would comply with all regulatory requirements (i.e., Section 91.3307.1 of the LAMC and Section 832 of the Civil Code of California).

#### Regulatory Compliance Measure

- **RCM NOI-8** All construction work shall be performed in accordance with Section 91.3307.1 (Protection Required) of the LAMC and Section 832 of the Civil Code of California. Compliance with these standards will ensure all adjacent property shall be protected from damage during construction. The Project Applicant shall complete a structural monitoring program for the adjacent uses during construction including the following steps and procedures:
  - Prior to start of construction, the Applicant shall retain the services of a structural engineer to visit the adjacent uses to inspect and document the apparent physical condition of the buildings, including but not limited to the building structure, interior walls, and ceiling finishes. In addition, the structural engineer shall establish baseline structural conditions of the buildings and prepare a shoring design.
  - The Applicant shall retain the services of a qualified acoustical engineer to review proposed construction equipment and develop and implement a vibration monitoring program capable of documenting the construction-related ground vibration levels at the building during construction. The vibration monitoring system shall measure and continuously store the peak particle velocity (PPV) in inch/second. Vibration data shall be stored on a one-second interval. The system shall also be programmed for two preset velocity levels: a warning level of 0.17 inch/second (PPV), and a regulatory level of 0.20 inch/second (PPV). The system shall also provide real-time alert when the vibration levels exceed the two preset levels.
  - In the event the warning levels above are triggered, the contractor shall identify the source of vibration generation and provide feasible steps to reduce the vibration level, including but not limited to halting/staggering concurrent activities and utilizing lower vibratory techniques.
  - In the event the regulatory levels above are triggered, the contractor shall halt the construction activities in the vicinity of the building and visually inspect the building for any damage. Results of

<sup>&</sup>lt;sup>68</sup> Los Angeles Municipal Code, Section 91.3307.1.

the inspection must be logged. The contractor shall identify the source of vibration generation and provide feasible steps to reduce the vibration level. Construction activities may then restart.

In the event damage occurs to an adjacent use due to construction vibration, such materials shall be repaired and restored to previous condition as feasible.

With respect to human annoyance resulting from vibration generated during construction, the sensitive receptors located in the vicinity of the Project Site could be exposed to increased vibration levels. Based on the data provided in Table VI-17, the adjacent residences could experience vibration levels of 87 VdB. As such, the 80 VdB residential annoyance threshold could be exceeded at these off-site locations during worst-case construction activity. However, it should be noted that vibration levels experienced in the Project vicinity would be temporary and intermittent, and would be reduced when the construction activities are located toward the center of the Project Site. As stated previously, the Project would comply with the City's existing construction LAMC regulations, which would protect adjacent uses from damage. Furthermore, consistent with the requirements of LAMC Section 112.05, construction activities would be compliant with the LAMC standards if all technically feasible noise reduction measures are implemented. The construction noise regulatory compliance measures RCM NOI-1 through RCM NOI-7 would also serve to reduce construction vibration levels to the maximum extent feasible. As such, human annoyance impacts with respect to construction vibration would be less than significant.

#### **Operational Vibration**

The Project involves the construction and operation of residential and commercial uses and would not involve the use of stationary equipment that would result in high vibration levels, which are more typical for large manufacturing and industrial projects. Groundborne vibrations at the Project Site and immediate vicinity currently result from heavy-duty vehicular travel (e.g., refuse trucks and transit buses) on the nearby local roadways, and the proposed land uses at the Project Site would not result in a substantive increase of these heavy-duty vehicles on the public roadways. While refuse trucks would be used for the removal of solid waste at the Project Site, these trips would typically only occur once a week and would not be any different than those presently occurring on-site and in the vicinity of the Project Site. As such, vibration impacts associated with operation of the Project would be less than significant.

#### c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

**No Impact.** The Project Site is not located in the vicinity of a private airstrip. The Hawthorne Municipal Airport is the closest airport to the Project Site, located approximately 10.2 miles to the south. In addition, the Project Site is not located within an airport land use plan. As such, the Project would not expose people to excessive aircraft noise levels. Therefore, no impact would occur.

#### **Cumulative Impacts**

**Less Than Significant Impact.** Development of the Project in combination with the related projects would result in an increase in construction noise, traffic noise, as well as on-site stationary noise sources in an already urbanized area of the City. With respect to construction impacts, it is unknown whether or not any of the related projects would have overlapping construction schedules with the Project. Operation is anticipated to commence in 2021. As such, albeit speculative, even conservatively assuming overlapping construction schedules, a potential cumulative noise impact would not occur due to the distance of the

Project Site with other related projects which have not yet been constructed as construction noise from the Project and each related project (that has not yet been built) would be localized. Similar to the Project, the related projects would be required to comply with the City's Noise Ordinance as well as mitigation measures that may be prescribed pursuant to CEQA that require significant impacts to be reduced to the extent feasible. As such, it is anticipated that the cumulative construction noise impact would be less than significant.

With respect to cumulative traffic noise impacts, it should be noted that the Project's traffic noise impacts are based on the predicted traffic volumes presented in the Transportation Study. Based on the Project's estimated trip generation, the Project would not double the traffic volumes on any roadway segment or study intersection in the Project Site vicinity. It is unknown whether or not any of the related projects would double the traffic volumes on any roadway segment or study intersection. If there were a noise impact, the Project would not make a cumulatively considerable contribution to the impact for the reasons described above.

The Project and related projects would be compliant with LAMC Section 112.02 which limits stationarysource noise from items such as roof-top mechanical equipment. As such, operational noise levels would be less than significant at the property line for each related project. For this reason, on-site operational noise produced by any related project would not result in a substantial or noticeable additive increase to Project-related on-site operational noise levels. As such, it is anticipated that the cumulative operational noise impact would be less than significant.

With respect to groundborne vibration impacts during construction, it is unknown whether or not any of the related projects would have overlapping construction schedules with the Project. Similar to the Project, the related projects would be required to comply with the City's Noise Ordinance as well as mitigation measures that may be prescribed pursuant to CEQA that require significant impacts to be reduced to the extent feasible. As such, it is anticipated that the cumulative construction vibration impact would be less than significant.

As discussed above, the groundborne vibration associated with the Project's operation would not generate excessive groundborne vibration levels. It is reasonably assumed that the related projects would not include operational uses that result in excessive groundborne vibration levels which may cause a cumulative impact. As such, it is anticipated that the cumulative operational vibration impact would be less than significant.

#### 14. POPULATION AND HOUSING

# a) Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

**Less Than Significant Impact.** As part of its comprehensive planning process for the Southern California region, SCAG, the MPO for Southern California with exception to San Diego County, has divided its jurisdiction into 14 subregions. The Project Site is located within the City of Los Angeles subregion, which includes all areas within the boundaries of the City of Los Angeles, the City of San Fernando, and a portion of unincorporated Los Angeles County. However, the numbers discussed herein pertain only to the City of Los Angeles. Based on the regional growth projections in the 2016–2040 RTP/SCS, the City of Los Angeles had an estimated permanent population of approximately 3,845,500 residents, 1,325,500 total housing units, and 1,696,400 employees. Moreover, SCAG estimates the population of the City will

increase to 4,609,400 residents, 1,690,300 housing units, and 2,169,100 employees by 2040, a 19.9 percent, 27.5 percent, and 28.9 percent increase from the 2012 estimates, respectively.

The Project's construction activities would create temporary construction-related jobs. In particular, most construction projects of this size and nature are completed in a timely manner and require specialized workers at various time frames, as needed, from the readily available local labor pool in the region. As a result, Project-related construction workers are not likely to relocate to the area as a consequence of working on the Project.

Based on 2019 estimates for the Boyle Heights Community Plan Area, the average household size is approximately 3.88 residents.<sup>69</sup> The Project would include 64 residential units, which could generate approximately 249 residents (64 x 3.88). It should be noted that this estimate is highly conservative given that approximately 49 percent of the Project's dwelling units would be studio and one-bedroom units. The addition of 249 residents represents approximately 0.005 percent of the estimated population in the City by 2040. The addition of 64 residential units represents approximately 0.004 percent of the estimated housing supply in the City by 2040. Additionally, the ground floor commercial uses of the Project could result in approximately 6-12 employees on-site.<sup>70</sup> Accounting for a conservative total of 12 employees, this would account for less than 0.001 percent of the total employment estimate for 2040.

The Project would not require the extension of roadways or other infrastructure (e.g., water facilities, sewer facilities, electricity transmission lines, natural gas lines, etc.) into undeveloped areas. As a result, the development of the Project would not indirectly induce population growth. Because the Project is consistent with General Plan and the Boyle Heights Community Plan, it would not introduce unplanned infrastructure not previously evaluated or anticipated in those plans. Therefore, impacts would be less than significant and no mitigation measures are required.

# b) Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

**No Impact.** The Project Site does not currently contain any existing structures, including residential uses. Therefore, development of the Project would not require construction of replacement housing. No impact would occur and no mitigation measures are required.

#### Cumulative Impacts

**Less Than Significant Impact.** Housing and population projections contained in the SCAG forecasts are based upon land uses designated in the General Plan. The related projects and other potential development projects that may occur throughout the City of Los Angeles subregion are expected to be largely consistent with their respective General Plan land use designations. Furthermore, SCAG periodically updates its projections for the various subregions that comprise the SCAG region, which allows these projections to be revised to reflect land use and planning changes that have occurred since previous updates. Accordingly, the effects of cumulative growth associated with the Project and other development within the City of Los Angeles subregion will be accommodated in SCAG forecasts over time

<sup>&</sup>lt;sup>69</sup> Los Angeles Department of City Planning, Boyle Heights, Community Plan Area – Demographic Profile, https://planning.lacity.org/complan/CPA\_DemographicProfile/2014\_BOYLE\_HTS.pdf, accessed: August 2019.

<sup>&</sup>lt;sup>70</sup> Los Angeles Unified School District, 2016 Developer Fee Justification Study, March 2017. (Based on a generation rate 0.00271 employees per square feet of neighborhood shopping center).

and cumulative impacts with respect to housing and population growth would be less than significant and no mitigation measures are required.

#### **15. PUBLIC SERVICES**

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

#### a) Fire protection?

**Less Than Significant Impact.** The Project would be served primarily by Fire Station No. 2, located at 1962 E. Cesar Chavez Avenue, approximately 0.5 mile north from the Project Site.<sup>71</sup> Fire Station No. 2 includes an assessment light force, engine, and paramedic rescue ambulance.<sup>72</sup> Fire Station No. 4, located at 450 E. Temple Street, approximately 1.7 miles west from the Project Site, would also serve the Project. Fire Station No. 4 includes an assessment engine, paramedic rescue ambulance, EMS battalion captain, and BLS rescue ambulance.<sup>73</sup> Furthermore, based on response metrics from January to July 2019, Fire Station No. 2 had an average response time 5 minutes and 9 seconds for non-EMS calls of, and 5 minutes and 9 seconds for EMS calls. Thus, the existing fire response distance from Fire Station No. 2 to the Project Site and average response time to the Project Site would be adequate.<sup>74</sup> Thus, the existing fire response distance from Fire Station No. 2 to the Project Site would be adequate.<sup>74</sup> Thus, the existing fire response distance from Fire Station No. 2 to the Project Site would be adequate.<sup>74</sup> Thus, the existing fire response distance from Fire Station No. 2 to the Project Site would be adequate.<sup>74</sup> Thus, the existing fire response distance from Fire Station No. 2 to the Project Site would be adequate.<sup>74</sup> Thus, the existing fire response distance from Fire Station No. 2 to the Project Site and average response time to the Project Site would be adequate.

The adequacy of fire protection is also based upon the required fire flow, equipment access, and LAFD's safety requirements regarding needs and service for the area. The required fire flow necessary for fire protection varies with the type of development, life hazard, occupancy, and the degree of fire hazard. Pursuant to LAMC Section 57.507.3.1, City-established fire flow requirements vary from 2,000 gpm in low-density residential areas to 12,000 gpm in high-density commercial or industrial areas. In any instance, a minimum residual water pressure of 20 pounds per square inch (PSI) is to remain in the water system while the required gpm is flowing. The adequacy of existing water pressure and availability in the Project area with respect to required fire flow would be confirmed by LAFD during the plan check review process. As part of the normal building permit process, the Project would be required to upgrade water service laterals, meters, and related devices, as applicable, in order to provide required fire flow; however, no new water facilities are anticipated. Moreover, such improvements would be conducted as part of the Project either on-site or off-site within the right-of-way, and as such, the construction activities would be temporary and not result in any significant environmental impacts.

Pursuant to LAMC Section 57.507.3.2, every first story dwelling unit and all first story portions of any commercial building must be within 300 feet of an approved fire hydrant. The nearest fire hydrant to the

<sup>&</sup>lt;sup>71</sup> City of Los Angeles Department of City Planning, Fire and Police Stations Map, May 2015, website: http://planning.lacity.org/mapgallery/Image/Citywide/LAPD\_LAFD.pdf, accessed: August 2019.

<sup>&</sup>lt;sup>72</sup> City of Los Angeles Fire Department, Fire Station Directory, March 2014.

<sup>&</sup>lt;sup>73</sup> Ibid.

<sup>&</sup>lt;sup>74</sup> City of Los Angeles Fire Department, Fire Stat LA, website: http://www.lafd.org/fsla/stations-map, accessed August 2019.

Project Site is located within the Metro Soto Station Plaza, which is adjacent to the Project Site.<sup>75</sup> Even so, additional fire hydrants may be required, depending on the building design and LAFD requirements, as determined by LAFD. Such improvements would be conducted as part of the Project either on-site or off-site within the right-of-way under the City's B-Permit process. Construction activities to install any new pipes or pumping infrastructure would be temporary and in short duration and would not result in any significant environmental impacts.

Emergency vehicle access to the Project Site would continue to be provided from local roadways (i.e., E. 1<sup>st</sup> Street and S. Soto Street). All improvements proposed would be in compliance with the Fire Code, including any additional access requirements of LAFD. Additionally, emergency access to the Project Site would be maintained at all times during both Project construction and operation.

Therefore, for the reasons stated above, impacts related to adequate proximity to a fire station, fire flow, fire hydrants, and emergency access would be less than significant.

#### b) Police protection?

**Less Than Significant Impact.** The Project Site is served by the City of Los Angeles Police Department's (LAPD) Hollenbeck Community Police Station, which is located at 2111 E. 1<sup>st</sup> Street, approximately 0.3 mile west from the Project Site.<sup>76</sup> The Hollenbeck Community Police Station is under the jurisdiction of LAPD's Central Bureau, and it's boundaries include approximately 200,000 people and covers 15.2 square miles.<sup>77</sup> The Project Site is located in Reporting District 454.<sup>78</sup>

Response time represents the period of time elapsed from the initiation of an assistance call to the appearance of a police unit at the scene. Calls for police assistance are prioritized based on the nature of the call. Unlike fire protection services, police units are most often in a mobile state; hence, actual distance between a headquarters facility and a given Project Site is of little relevance. Instead, the number of police officers out on the street is more directly related to the realized response time.

#### Construction

Construction sites, if not properly managed, have the potential to attract criminal activity (such as trespassing, theft, and vandalism) and can become a distraction for local law enforcement from more pressing matters that require their attention. However, as required by the City as a regulatory compliance measure, the Project would employ construction safety features including erecting temporary fencing along the periphery of the active construction areas to screen as much of the construction activity from view at the local street level and to deter trespassing, vandalism, short-cut attractions, potential criminal activity, and other nuisances. Therefore, potential impacts to police protection services during the construction of the Project would be less than significant.

<sup>&</sup>lt;sup>75</sup> City of Los Angeles, Los Angeles GeoHub, Fire Hydrants (DWP), website: http://geohub.lacity.org/datasets/39e5c79ddd8a4eada40340f6ceb08fae\_0, accessed: August 2019.

<sup>&</sup>lt;sup>76</sup> City of Los Angeles Department of City Planning, Fire and Police Stations Map, May 2015, website: http://planning.lacity.org/mapgallery/Image/Citywide/LAPD\_LAFD.pdf, accessed: August 2019.

<sup>&</sup>lt;sup>77</sup> City of Los Angeles Police Department, Central Bureau, Hollenbeck Community Police Station, About Hollenbeck, website: http://www.lapdonline.org/hollenbeck\_community\_police\_station/content\_basic\_view/1649, accessed: August 2019.

<sup>&</sup>lt;sup>78</sup> City of Los Angeles Department of City Planning, Zone Information & Map Access System, website: http://zimas.lacity.org, accessed: August 2019.

#### Operation

As discussed in Section VI.14 previously, the Project could result in an on-site population of approximately 249 persons and 12 employees, thereby generating a potential increase in the number of service calls from the Project Site. As discussed in Section VI.14, Population and Housing, these population increase totals are conservative. Responses to thefts, vehicle burglaries, vehicle damage, traffic-related incidents, and crimes against persons would be anticipated to increase as a result of the increased on-site activity and increased traffic on adjacent streets and arterials. The Project would include adequate and strategically positioned lighting to enhance public safety. Visually obstructed and infrequently accessed "dead zones" would be limited, and, where possible, security controlled to limit public access. The building and layout design of the Project would also include nighttime security lighting and secure parking facilities. Additionally, the continuous visible and non-visible presence of residents at all times of the day would provide a sense of security during evening and early morning hours. As such, the Project's residents would be able to monitor suspicious activity at the building entry points. These preventative and proactive security measures would decrease the amount of service calls that LAPD would otherwise receive. In light of these features, it is anticipated that any increase in demands upon police protection services would be relatively low, and not necessitate the construction of a new police station, the construction of which may cause significant environmental impacts. Therefore, potential impacts to police protection services during the operation of the Project would be less than significant.

#### c) Schools?

**Less Than Significant Impact**. The Project is in an area that is currently served by the Los Angeles Unified School District (LAUSD) schools. The Project would improve the Project Site with a new five-story, 64.5-foot high mixed-use affordable housing building consisting 63 affordable units and one market-rate manager's unit, 2,443 square feet of ground floor commercial space, and 50 total automobile parking spaces in a one level subterranean parking garage. As such, the Project would increase the number of students in the area. As shown in Table VI-18, Student Generation, the Project would generate approximately 26 students. However, to reduce any potential population growth impacts on public schools, the governing board of any school district is authorized to levy a fee, charge, dedication, or other requirement against any construction within the boundaries of the district for the purpose of funding the construction or reconstruction of facilities (pursuant to California Education Code Section 17620(a)(1)). The Developer Fee Justification Study for LAUSD was prepared to support the school district's levy of the fees authorized by Section 17620 of the California Education Code.<sup>79</sup> The Project would be required to pay the appropriate fees, based on the square footage, to LAUSD.

Land Use	Size	Students per Household <sup>a</sup>	Total Students							
Residential Units	64 du	0.4	26							
Students	Generated		26							
Notes: du = dwelling units										
<sup>a</sup> Los Angeles Unified School District, 2016 Developer Fee Justification Study, March 2017										

Table VI-18
Student Generation

<sup>&</sup>lt;sup>79</sup> Los Angeles Unified School District, 2016 Developer Fee Justification Study, March 2017.

The Leroy F. Greene School Facilities Act of 1998 (SB 50) sets a maximum level of fees a developer may be required to pay to address a project's impacts on school facilities. The maximum fees authorized under SB 50 apply to zone changes, general plan amendments, zoning permits, and subdivisions. SB 50 is deemed to fully address school facilities impacts, notwithstanding any contrary provisions in CEQA or other State or local law. Therefore, as payment of appropriate school fees to LAUSD is required by law and considered to fully address impacts, impacts would be less than significant.

#### d) Parks?

**Less Than Significant Impact**. The City of Los Angeles Department of Recreation and Parks (LADRP) manages all municipal recreation and park facilities within the City. Table VI-19, Parks and Recreation Facilities Serving the Project Area, identifies the facilities serving the Project Site.<sup>80</sup>

Park/Recreation Facility Name	Location	Approximate Distance to the Project Site (miles)	Service Radius (miles)							
	Community Parks									
Pecan Recreation Center	145 S. Pecan Street	0.72								
Pecan Pool	120 S. Glass Street	0.75								
Hollenbeck Recreation Area	415 S. St. Louis Street	0.36								
Ross Valencia Community Park	1 <sup>st</sup> and Chicago Street	0.14								
Prospect Park	Echandia Street & Judson Street	0.83	1.0							
State Street Recreation Center	716 N. State Street	0.67	1.0							
Roosevelt Pool	456 S. Mathews Street	0.42								
Wabash Recreation Center	2765 Wabash Avenue	0.86								
Evergreen Recreation Center	2844 E. 2 <sup>nd</sup> Street	0.44								
Boyle Heights Sports Center	933 S. Mott Street	0.81								
Source: City of Los Angeles Departmer August 2019.	nt of Recreation and Parks, Map Locater,	website: http://www.lapa	rks.org, accessed:							

Table VI-19Parks and Recreation Facilities Serving the Project Area

As discussed in Section VI.14 previously, the Project could result in an on-site population of approximately 249 persons. The Project is located in an area of the City that is below the City's standard for neighborhood and community park acreage. The City's standard ratio of neighborhood and community parks to population is 4 acres per 1,000 people as set forth in the Public Recreation Plan. As of 2010 the Boyle Heights Community Plan Area serves less than 1 acre of open space per 1,000 residents.<sup>81</sup> The facilities in this area with active recreational features are very heavily used. While LADRP is currently in the process of implementing the 50 Parks Initiative, these are small pocket parks typically less than half an acre, often

<sup>&</sup>lt;sup>80</sup> City of Los Angeles Department of Recreation and Parks, Map Locater, website: http://www.laparks.org, accessed: August 2019.

<sup>&</sup>lt;sup>81</sup> City of Los Angeles Department of City Planning, Map 62 Park Level of Service (Acres per 1,000 Residents in 2010), website: http://planning.lacity.org/cwd/framwk/healthwellness/Maps/62.pdf, accessed: August 2019.

only one-tenth of an acre, and have a service radius of one-half mile. None of these planned parks will be sited within a half-mile of the Project Site.<sup>82</sup>

Consistent with the LADRP's recommended strategy to help alleviate the burden on existing park and recreational facilities, the Project would provide open space to the proposed residences. Specifically, the Project proposes 8,171 square feet of open space including: a central courtyard, community terrace, roof terrace, community room, exercise room, and private balconies. These recreational amenities would help relieve stress on the City's existing park system. Even so, the Project would result in an increase in the use of parks and recreational facilities that may not have the capacity to serve residents. However, this impact would be reduced through the required payment of the Dwelling Unit Construction Tax to the City for the construction of apartment units. Monies collected as part of the Dwelling Unit Construction Tax is placed in a "Park and Recreational Sites and Facilities Fund" and used exclusively for the acquisition and development of park and recreational sites and facilities as set forth in LAMC Section 21.10.3(d). Additionally, the Project would be required to pay Park Fees to the LADRP per LAMC Section 19.17. Therefore, impacts would be less than significant.

#### e) Other public facilities?

**Less Than Significant Impact.** Los Angeles Public Library (LAPL) provides library services to the City. Table VI-20, Libraries Serving the Project Site, lists the libraries identified by LAPL as available to serve the Project: 119 South Soto Street, Los Angeles, CA, USA

Library Name	Location	Approximate Distance to the Project Site (miles)	Service Radius (miles)
Benjamin Franklin Branch Library	2200 E. 1 <sup>st</sup> Street	0.1	
Malabar Branch Library	2801 Wabash Avenue	0.9	
Little Tokyo Branch Library	203 S. Los Angeles Street	1.9	
Chinatown Branch Library	639 N. Hill Street	2.1	3.0
Robert Louis Stevenson Branch Library	803 Spence Street	1.3	3.0
Lincoln Height Branch Library	2530 Workman Street	2.3	
Central Library	630 W. 5 <sup>th</sup> Street	2.6	

Table VI-20 Libraries Serving the Project Area

Source: Los Angeles Public Library, Locations and Hours, website: http://www.lapl.org/branches, accessed: August 2019.

On March 8, 2011, City voters approved ballot Measure L, which amends the City Charter to incrementally increase the amount the City is required to dedicate annually from its General Fund to LAPL to an amount equal to 0.03 percent of the assessed value of all property in the City, and incrementally increase LAPL's responsibility for its direct and indirect costs until it pays for all of its direct and indirect costs. The measure was intended to provide neighborhood public libraries with additional funding to help restore library service hours, purchase books, and support library programs, subject to audits, using existing funds with

<sup>&</sup>lt;sup>82</sup> Los Angeles Department of Recreation and Parks, 50 Parks Initiative, Status of 50 Parks Projects Map, website: http://www.laparks.org/50parks/map, accessed: August 2019.

no new taxes. Beginning in fiscal year 2014-2015 and thereafter, LAPL was to be responsible for payment of all of its direct and indirect costs.<sup>83</sup>

Library funding is now mandated under the City Charter to be funded from property taxes including those assessed against the Project, which would increase with the new development and be utilized for additional staff, books, computers, and other library materials. Therefore, impacts to library facilities would be less than significant and no mitigation measures are required.

#### **Cumulative Impacts**

#### Fire

Less Than Significant Impact. Development of the Project in combination with the related projects would cumulatively increase the demand for fire protection services. Over time, LAFD would continue to monitor population growth and land development throughout the City and identify additional resource needs including staffing, equipment, trucks and engines, ambulances, other special apparatuses, and possibly station expansions or new station construction that may become necessary to achieve the desired level of service. Through the City's regular budgeting efforts, LAFD's resource needs would be identified and monies allocated according to the priorities at the time. Any new or expanded fire station would be funded via existing mechanisms (e.g., property and sales taxes, government funding, and developer fees) to which the Project and cumulative growth would contribute. Moreover, all of the cumulative development would be reviewed by LAFD in order to ensure adequate fire flow capabilities and adequate emergency access. Compliance with LAFD, City Building Code, and Fire Code requirements related to fire safety, access, and fire flow would ensure that cumulative impacts to fire protection would be less than significant and no mitigation measures are required.

#### Police

Less Than Significant Impact. It is anticipated that the Project in combination with the related projects would increase the demand for police protection services. This cumulative increase in demand for police protection services would increase demand for additional LAPD staffing, equipment, and facilities over time. Similar to the Project, other projects served by LAPD would implement safety and security features according to LAPD recommendations. LAPD would continue to monitor population growth and land development throughout the City and identify additional resource needs including staffing, equipment, vehicles, and possibly station expansions or new station construction that may become necessary to achieve the desired level of service. Through the City's regular budgeting efforts, LAPD's resource needs would be identified and monies allocated according to the priorities at the time. Any new or expanded police station would be funded via existing mechanisms (e.g., property and sales taxes, government funding, and developer fees) to which the Project and cumulative growth would contribute. Therefore, the cumulative impact on police protection services would be less than significant and no mitigation measures are required.

#### Schools

**Less Than Significant Impact.** As discussed above, payment of developer impact fees in accordance with SB 50 would ensure that the impacts of the Project on school facilities would be less than significant.

<sup>&</sup>lt;sup>83</sup> Los Angeles Office of the City Clerk, Interdepartmental Correspondence and Attachments Regarding Measure L, website: http://clkrep.lacity.org/onlinedocs/2011/11-1100-S2\_rpt\_cao\_11-16-10.pdf, accessed: August 2019.

Similar to the Project, the related projects would be required to pay school fees to the appropriate school district wherein their site is located. The payment of school fees would fully mitigate any potential impacts to school facilities. Therefore, cumulative impacts would be less than significant and no mitigation measures are required.

#### Parks

**Less Than Significant Impact.** As discussed above, the Project would result in a less than significant impact on parks and recreational facilities. Similar to the Project, the related projects in the area would be required to pay a Dwelling Unit Construction Tax or other similar purpose fees, as appropriate to the projects' location and proposed uses. The payment of fees would fully mitigate any potential impacts to park and recreational facilities. Therefore, the cumulative impact would be less than significant and no mitigation measures are required.

#### Library

**Less Than Significant Impact.** As discussed above, library funding is now mandated under the City Charter to be funded from property taxes including those assessed against the Project, which would increase with the new development and be utilized for additional staff, books, computers, and other library materials. Similar to the Project, the related projects in the area would be required to pay the required City fees. Therefore, the cumulative impact would be less than significant and no mitigation measures are required.

#### 16. **RECREATION**

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

**Less Than Significant Impact.** As discussed in Section VI.15 above, the Project could result in an on-site population of approximately 249 persons. The Project is located in an area of the City that is below the City's standard for neighborhood and community park acreage. The City's standard ratio of neighborhood and community park acreage. The City's standard ratio of neighborhood and community parks to population is 4 acres per 1,000 people as set forth in the Public Recreation Plan. As of 2010 the Boyle Heights Community Plan Area serves less than 1 acre of open space per 1,000 residents.<sup>84</sup> The facilities in this area with active recreational features are very heavily used. While LADRP is currently in the process of implementing the 50 Parks Initiative, these are small pocket parks typically less than half an acre, often only one-tenth of an acre, and have a service radius of one-half mile. None of these planned parks will be sited within a half-mile of the Project Site.<sup>85</sup>

Consistent with the LADRP's recommended strategy to help alleviate the burden on existing park and recreational facilities, the Project would provide open space to the proposed residences. Specifically, the Project proposes 8,171 square feet of open space including: a central courtyard, community terrace, roof terrace, community room, exercise room, and private balconies. These recreational amenities would help relieve stress on the City's existing park system. Even so, the Project would result in an increase in the use of parks and recreational facilities that may not have the capacity to serve residents. However, this impact

<sup>&</sup>lt;sup>84</sup> City of Los Angeles Department of City Planning, Map 62 Park Level of Service (Acres per 1,000 Residents in 2010), website: http://planning.lacity.org/cwd/framwk/healthwellness/Maps/62.pdf, accessed: August 2019.

<sup>&</sup>lt;sup>85</sup> Los Angeles Department of Recreation and Parks, 50 Parks Initiative, Status of 50 Parks Projects Map, website: http://www.laparks.org/50parks/map, accessed: August 2019.

would be reduced through the required payment of the Dwelling Unit Construction Tax to the City for the construction of apartment units. Monies collected as part of the Dwelling Unit Construction Tax is placed in a "Park and Recreational Sites and Facilities Fund" and used exclusively for the acquisition and development of park and recreational sites and facilities as set forth in LAMC Section 21.10.3(d). Additionally, the Project would be required to pay Park Fees to the LADRP per LAMC Section 19.17. Therefore, impacts would be less than significant.

# b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

**Less than Significant Impact.** The Project would provide 8,171 square feet of open space including: a central courtyard, community terrace, roof terrace, community room, exercise room, and private balconies. These recreational amenities would be internal to the Project and would help relieve stress on the City's existing park and recreational system. The Project does not include, nor would it necessitate, a park or public recreational facility component, the construction of which could have an adverse environmental impact. Therefore, impacts would be less than significant and no mitigation measures are required.

#### **Cumulative Impacts**

**Less Than Significant Impact**. As discussed above, the Project would result in a less than significant impact on parks and recreational facilities. Similar to the Project, the related projects in the area would be required to pay a Dwelling Unit Construction Tax or other similar purpose fees, as appropriate to the projects' location and proposed uses. The payment of fees would fully mitigate any potential impacts to park and recreational facilities. Therefore, the cumulative impact would be less than significant and no mitigation measures are required.

#### **17. TRANSPORTATION**

The following analysis utilizes information provided in the *Transportation Impact Study, Los Lirios Mixed-Use Project*, prepared by Linscott, Law & Greenspan, Engineers, July 18, 2018 (Transportation Study) which is provided in Appendix D. An Addendum to the Transportation Study is also provided in Appendix D. The Transportation Study was reviewed and approved by the Los Angeles Department of Transportation (LADOT) as discussed in the LADOT approval letter dated October 2, 2018.

# a) Would the project Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

#### Less Than Significant.

#### Project Traffic Impacts

Traffic volumes expected to be generated by the Project during the weekday AM and PM peak hours, as well as on a daily basis, were estimated using rates as published in the ITE *Trip Generation Manual* or provided by LADOT. As published in the *City of Los Angeles Transportation Impact Study Guidelines,* affordable housing trip rates for family and senior units derived from the independent study conducted in 2016 of affordable housing sites in the City of Los Angeles were used to forecast the weekday AM and PM peak hour traffic volumes expected to be generated by the affordable housing residential component. Traffic volumes expected to be generated by the commercial land use components of the Project were based upon rates per 1,000 gross square feet.

In addition to the trip generation forecast for the Project, a forecast was made of the likely pass-by trips that could be anticipated at the site. Pass-by trips are made as intermediate stops on the way from an origin to a primary trip destination without a route diversion. Pass-by trips are attracted from traffic passing the site on an adjacent street or roadway that offers direct access to the generator. Pass-by trip adjustments of 50 percent and 20 percent were applied to the traffic volume forecast for the retail and restaurant components, respectively, pursuant to the LADOT policy.

A trip reduction adjustment was also employed in the project trip generation forecast to account for the proximity to the existing adjacent Metro Soto Station, as well as the high level of bus transit opportunities and pedestrian activity in the Project study area. Based on LADOT traffic study guidelines and discussions with LADOT staff, a transit trip reduction factor of 15 percent (15%) would be applicable to the Project based on the Project's proximity to the Metro Soto Station and public bus transit routes in the area. However, no other adjustments were made to the Project trip generation forecasts to account for trips made internal to the project site (i.e., internal capture).

As presented in Table VI-21, Project Trip Generation, the Project is expected to generate 48 vehicle trips (22 inbound trips and 26 outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the Project is expected to generate 41 vehicle trips (23 inbound trips and 18 outbound trips). Over a 24-hour period, the Project is forecast to generate 496 daily trip ends during a typical weekday (248 inbound trips and 248 outbound trips).

		Daily	AM Pe	ak Hour V	Volumes	PM Pe	PM Peak Hour Volume		
Land Use	Size	Trip Ends Volumes	In	Out	Total	In	Out	Total	
Apartments	66 du	270	13	20	33	12	10	22	
Less Transit Adjustment (15%)		(41)	(2)	(3)	(5)	(2)	(2)	(4)	
Community Room	1,490 sf	43	2	1	3	1	2	3	
Less Transit Adjustment (15%)		(6)							
Retail	2,500 sf	94	1	1	2	5	5	10	
Less Pass-by Adjustment (50%)		(47)	(1)	(1)	(2)	(3)	(3)	(6)	
Less Transit Adjustment (15%)		(7)							
High-Turnover Restaurant	2,500 sf	280	14	11	25	15	9	24	
Less Pass-by Adjustment (50%)		(56)	(3)	(2)	(5)	(3)	(2)	(5)	
Less Transit Adjustment (15%)		(34)	(2)	(1)	(3)	(2)	(1)	(3)	
	Subtotal	496	22	26	48	23	18	41	
Source: Linscott Law & Greenspan	Transportati	on Impact Stu	dv Los Li	rios Mixed	-Use Proiec	t (Annend	lix D)		

Table VI-21 Project Trip Generation

Immediate access to the Project and associated parking facility will be provided via the proposed driveway located on the east side of the alleyway along the westerly property frontage which can be accessed from E. 1<sup>st</sup> Street. The following five study intersections were selected for analysis in consultation with LADOT staff in order to determine potential impacts related to the Project:

- 1. Breed Street/E. 1<sup>st</sup> Street
- 2. S. Soto Street/Cesar E. Chavez Avenue

- 3. S. Soto Street/ E. 1<sup>st</sup> Street
- 4. S. Soto Street/4<sup>th</sup> Street
- 5. Mott Street/ E. 1<sup>st</sup> Street

The study intersections were evaluated using the Critical Movement Analysis (CMA) method of analysis which determines Volume-to-Capacity (v/c) ratios on a critical lane basis. The overall intersection v/c ratio is subsequently assigned a Level of Service (LOS) value to describe intersection operations. Level of Service varies from LOS A (free flow) to LOS F (jammed condition).

The significance of the potential impacts of project generated traffic was identified using the traffic impact criteria set forth in LADOT's *Transportation Impact Study Guidelines*, December 2016. According to the City's published traffic study guidelines, the impact is considered significant if the project-related increase in the *v/c* ratio equals or exceeds the thresholds presented in Table VI-22, City of Los Angeles Intersection Impact Threshold Criteria.

LOS	Final v/c	Project Related Increase in v/c
С	>0.700-0.800	equal to or greater than 0.040
D	>0.800-0.900	equal to or greater than 0.020
E or F	>0.900	equal to or greater than 0.010

Table VI-22 City of Los Angeles Intersection Impact Threshold Criteria

Traffic impacts at the study intersections were analyzed for the following conditions:

- (a) Existing conditions.
- (b) Existing with project conditions.
- (c) Condition (a) plus one percent (1.0%) annual ambient traffic growth through year 2021 and with completion and occupancy of the related projects (i.e., future without project conditions).
- (d) Condition (c) with completion and occupancy of the proposed project.
- (e) Condition (d) with implementation of project mitigation measures, where necessary.

The traffic volumes for each new condition were added to the volumes in the prior condition to determine the change in capacity utilization at the study intersections. It should be noted that Condition (b) above is a hypothetical scenario in that it calculates the traffic due to the occupancy of the Project in addition to the existing traffic volumes, but changes to existing volumes are expected to occur throughout the Project's construction period due to other area projects and regional growth. However, this condition has been prepared to be consistent with the general rule under CEQA that the potential impacts of a development project are to be measured against existing conditions. Condition (d) above analyzes future conditions upon completion and full occupancy of the Project, which is expected to occur in 2021.

As indicated in Table VI-23, all of the five study intersections are presently operating at LOS C or better during the weekday AM and PM peak hours. The "Existing With Project" scenario indicates that the Project is not expected to create significant impacts at any of the five study intersections. Incremental, but not significant, impacts are noted at the study intersections. Similarly, the "With Proposed Project" scenario indicates that the Project is not expected to create significant impacts at create significant impacts.

		Peak	Exis	ting	Existi	Existing With Project		Sig.	Future W/O Project		Future With Project		Sig.	
No.	Intersection	Hour	V/C	LOS	v/c	LOS	Change	Impact?	V/C	LOS	V/C	LOS	Change	Impact?
A Deced Charact /F. Ast Charact	AM	0.573	А	0.581	А	0.008	NO	0.695	В	0.703	С	0.008	NO	
1	Breed Street/E. 1 <sup>31</sup> Street	PM	0.454	А	0.464	А	0.010	NO	0.631	В	0.641	В	0.010	NO
2 S. Soto Street/Cesar E. Chavez Avenue	AM	0.617	В	0.620	В	0.003	NO	0.749	С	0.752	С	0.003	NO	
	S. Soto Street/Cesar E. Chavez Avenue	AM	0.567	А	0.568	А	0.001	NO	0.688	В	0.690	В	0.002	NO
2		AM	0.724	С	0.737	С	0.013	NO	0.847	D	0.860	D	0.013	NO
3	S. Soto Street/ E. 1st Street	PM	0.687	В	0.701	С	0.014	NO	0.912	Е	0.917	E	0.005	NO
		AM	0.621	В	0.623	В	0.002	NO	0.838	D	0.841	D	0.003	NO
4	S. Soto Street/4 <sup>th</sup> Street	PM	0.616	В	0.616	В	0.000	NO	0.850	D	0.850	D	0.000	NO
_		AM	0.619	В	0.625	В	0.006	NO	0.719	С	0.726	С	0.007	NO
5	Mott Street/ E. 1 <sup>st</sup> Street	PM	0.529	А	0.532	А	0.003	NO	0.645	В	0.649	В	0.004	NO
Source	: Linscott Law & Greenspan, Transportation	Impact Stud	y, Los Lirios	Mixed-Use	e Project (	Append	lix D).							

Table VI-23City of Los Angeles Levels of Service Summary and Volume to Capacity Ratios

Incremental, but not significant, impacts are noted at the study intersections. No traffic mitigation measures are required or recommended for the study intersections.

#### **Related Projects**

A forecast of on-street traffic conditions prior to occupancy of the Project was prepared by incorporating the potential trips associated with other known development projects (related projects) in the area. With this information, the potential impact of the Project can be evaluated within the context of the cumulative impact of all ongoing development. The related projects research was based on information on file at the City of Los Angeles Departments of Transportation and Planning. The related projects' respective traffic generation for the weekday AM and PM peak hours, as well as on a daily basis for a typical weekday, is summarized in Table VI-24, Related Projects Trip Generation.

		Daily Trip	AM Pea	k Hour V	olumes <sup>[2]</sup>	PM Pea	k Hour V	olumes <sup>[2]</sup>
	Location	Ends	In	Quit	Total	Im	0t	Total
טו		volumes	IN	Out	Total	IN	Out	Total
1	1510 N. San Pablo Street	7,715	613	140	/53	161	613	//4
2	2901 E. Olympic Boulevard	19,382	463	1,044	1,507	1,123	8.04	1,927
3	950 East 3 <sup>rd</sup> Street	6,372	162	177	339	245	213	458
4	3401 E. 1 <sup>st</sup> Street	458	6	18	24	25	17	42
5	963 E. 4 <sup>th</sup> Street	2,512	106	22	128	113	138	251
6	2051 E. 7 <sup>th</sup> Street	2,310	17	127	144	145	64	209
7	826 S. Mateo Street	1,267	11	34	45	62	39	101
8	555 S. Mateo Street	4,300	5	30	35	220	205	425
9	2030 E. 7 <sup>th</sup> Street	2,306	274	34	308	69	249	318
10	540 S. Santa Fe Avenue	726	90	12	102	17	81	98
11	1030 N. Soto Street	662	25	18	43	25	23	48
12	2407 E. 1 <sup>st</sup> Street	450	2	18	20	22	14	36
13	410 N. Center Street	1,165	87	0	87	0	79	79
14	500 S. Mateo Street	1,052	48	41	89	50	31	81
15	2130 E. Violet Street	1,351	137	30	167	39	122	161
16	929 E. 2 <sup>nd</sup> Street	2,153	68	12	80	105	96	201
17	2420 E. Cesar Chavez Avenue	1,087	25	26	61	54	44	98
18	520 S. Mateo Street	4,995	157	220	377	274	223	497
19	2650 E. Olympic Boulevard	12,247	498	447	945	599	539	1,138
20	527 S. Colyton Street	2,095	36	116	152	121	74	195
21	940 E. 4 <sup>th</sup> Street	788	14	37	51	44	31	75
22	806 E. 3 <sup>rd</sup> Street	253	1	(1)	0	13	7	20
23	640 S. Santa Fe Avenue	1,330	90	8	98	43	114	157
24	443 S. Soto Street	277	131	112	243	32	25	57
25	2143 E. Violet Street	4,477	329	122	451	130	330	460
26	676 S. Mateo Street	1,990	50	95	145	106	51	157
27	1000 S. Santa Fe Avenue	2,029	194	30	224	57	192	249

# Table VI-24 Related Projects Trip Generation<sup>[1]</sup>

		Daily Trip	AM Peak Hour Volumes <sup>[2]</sup> PM Peak Hour Volum					olumes <sup>[2]</sup>
ID	Location	Ends Volumes <sup>[2]</sup>	In	Out	Total	In	Out	Total
28	220 N. Center Street	2,166	33	119	152	121	79	200
29	810 E. 3 <sup>rd</sup> Street	1,487	37	32	69	87	48	135
30	2110 Bay Street	2,394	180	63	243	89	192	281
31	401 S. Hewitt Street	3,493	365	76	441	100	324	424
	Total	95,289	4,254	3,269	7,523	4,291	5,061	9,352

[1] Sources: City of Los Angeles Department of Transportation (LADOT) and Department of City Planning (LADCP). The peak hour traffic volumes were forecast based on trip data provided by LADOT and by applying trip rates as provided in the ITE "Trip Generation Manual", 9th Edition, 2012.

[2] Trips are one-way traffic movements, entering or leaving.

Source: Linscott Law & Greenspan, Transportation Impact Study, Los Lirios Mixed-Use Project (Appendix D).

#### Ambient Traffic Growth Factor

Horizon year background traffic growth estimates have been calculated using an ambient traffic growth factor. The ambient traffic growth factor is intended to include unknown related projects in the study area as well as account for typical growth in traffic volumes due to the development of projects outside the study area. Ambient traffic growth in the Los Angeles area is presented in the *2010 Congestion Management Program for Los Angeles County* (CMP manual) and determined in consultation with LADOT staff. It is noted that based on review of the general traffic growth factors provided in the CMP manual for the Central/Southeast area (RSA 23 – Downtown Los Angeles, Exposition Park, MacArthur Park), it is anticipated that the existing traffic volumes are expected to increase at an annual rate of less than 1.0% per year between the years 2010 and 2020. An annual growth rate of one percent (1.0%) to the buildout year 2021 was used for analysis purposes. Thus, application of this annual growth factor allows for a conservative, worst case forecast of future traffic volumes in the area. Further, it is noted that the CMP manual's traffic growth rate is intended to anticipate future traffic generated by development projects in the project vicinity. Thus, the inclusion in the Transportation Study of both a forecast of traffic generated by known related projects plus the use of an ambient growth traffic factor based on CMP traffic model data results in a conservative estimate of future traffic volumes at the study intersections.

#### Summary of Operation-Related Traffic Impacts

It is concluded that the Project is not expected to create a significant traffic impact at any of the five study intersections based on the City of Los Angeles thresholds of significance used for evaluating traffic impacts. Incremental, but not significant, impacts are noted at the study intersections with completion of the Project. Because there are no significant impacts, no direct traffic mitigation measures are required or recommended for the study locations.

#### **Construction Traffic Impacts**

Construction activities would include demolition, grading, excavation, and building construction. The Project would be ready for occupancy in 2021.

Construction workers would be on-site before 7:00 A.M. and would typically leave the Project Site prior to 5:00 P.M. These workers typically arrive and depart outside of the commuter peak hours, thereby minimizing the effect of construction worker traffic. During construction, there would be far fewer daily and peak hour trips than the Project trip generation estimates. As discussed above, traffic impacts during

operation would be less than significant. Therefore, the construction process would not result in significant traffic impacts to study intersections.

The Project Applicant would be required to submit formal construction staging and traffic control plans for review and approval by LADOT prior to the issuance of any construction permits. Moreover, LADOT recommends the Project implement a Work Site Traffic Control Plan which would be developed for use during the entire construction period. The plan would include a designated haul route, staging area, and traffic control procedures to mitigate the traffic impacts during construction. This plan would also incorporate safety measures around the construction site to reduce the risk to pedestrian traffic near the work area. The Work Site Traffic Control Plan would identify all traffic control measures, signs, delineators, and work instructions to be implemented by the construction contractor through the duration of demolition and construction activity. Construction equipment and worker cars would generally be contained on-site. At times when on-site staging and parking is not available, a secondary staging area would be required. Thus, adherence to the Work Site Traffic Control Plan would ensure constructionrelated impact would not result in a significant impact to the performance of the circulation system (see RCM TRAF-1). Therefore, impacts would be less than significant and no mitigation measures are required.

#### Regulatory Compliance Measure

- **RCM TRAF-1** The Applicant shall prepare a detailed Work Site Traffic Control Plan that shall include, but not be limited to, the following elements, as appropriate:
  - Advance, bilingual notification of adjacent property owners and occupants of upcoming construction activities, including estimated duration of construction and daily hours of construction;
  - Prohibition of construction worker or equipment parking on adjacent streets;
  - Temporary pedestrian, bicycle, and vehicular traffic controls during all construction activities adjacent to ensure traffic safety on public rights of way. These controls shall include, but not be limited to, flag people trained in pedestrian and bicycle safety at the Project Site's driveways.
  - Temporary traffic control during all construction activities adjacent to public rights-of-way to improve traffic flow on public roadways (e.g., flag men);
  - Scheduling of construction activities to reduce the effect on traffic flow on surrounding arterial streets;
  - Potential sequencing of construction activity for the Project to reduce the amount of construction-related traffic on arterial streets;
  - Containment of construction activity within the Project Site boundaries;
  - Safety precautions for pedestrians through such measures as alternate routing and protection barriers shall be implemented;
  - Scheduling of construction-related deliveries, haul trips, etc., so as to occur outside the commuter peak hours;
  - Applicant shall plan construction and construction staging as to maintain pedestrian access on adjacent sidewalks throughout all construction phases. This requires the applicant to maintain adequate and safe pedestrian protection, including physical separation (including

utilization of barriers such as K-Rails or scaffolding, etc.) from work space and vehicular traffic and overhead protection, due to sidewalk closure or blockage, at all times;

- Temporary pedestrian facilities should be adjacent to the project site and provide safe, accessible routes that replicate as nearly as practical the most desirable characteristics of the existing facility;
- Covered walkways shall be provided where pedestrians are exposed to potential injury from falling objects;
- Applicant shall keep sidewalk open during construction until only when it is absolutely required to close or block sidewalk for construction staging. Sidewalk shall be reopened as soon as reasonably feasible taking construction and construction staging into account.

#### Transit Impact Review

The Project would be incorporated into the Metro Soto Station Plaza which provides service for the Metro Gold Line. Moreover, the Project is served by Metro bus lines 30/330, 68, 106, 251, 252, 605, 751, and 770, and Montebello bus line 40. A summary of these existing transit services, including the transit route, destinations and peak hour headways is presented in Table VI-25, Existing Transit Routes.

As required by the 2010 Congestion Management Program for Los Angeles County, a review has been made of the potential impacts of the project on transit services. The Project trip generation, was adjusted by values set forth in the CMP (i.e., person trips equal 1.4 times vehicle trips, and transit trips equal 3.5 percent of the total person trips) to estimate transit trip generation. Pursuant to LADOT approval, assuming 15 percent (15%) transit trips, the proposed project is forecast to generate demand for ten transit trips during the weekday AM peak hour and nine transit trips during the PM peak hour. Over a 24-hour period, the proposed project is forecast to generate demand for 104 daily transit trips. The calculations are as follows:

- AM Peak Hour =  $48 \times 1.4 \times 0.015$  = 10 Transit Trips
- PM Peak Hour =  $41 \times 1.4 \times 0.015$  = 9 Transit Trip
- Daily Trips =  $496 \times 1.4 \times 0.035 = 104$  Transit Trips

As shown in Table VI-25, 10 bus and rail transit lines and routes are provided adjacent to or in close proximity the Project Site. These 10 transit lines provide services for an average of (i.e., average of the directional number of buses during the peak hours) generally 81 buses/trains during the AM peak hour and roughly 86 buses/trains during the PM peak hour. Therefore, based on the calculated weekday AM and PM peak hour trips, this would correspond to less than one additional transit rider per bus/train. It is anticipated that the existing transit service in the Project area will adequately accommodate the increase of project-generated transit trips. Thus, given the number of project-generated transit trips per bus/train, no Project impacts on existing or future transit services in the Project area are expected to occur as a result of the Project.

		Boadway(s)	No Buses During I	o. of s/Trair Peak H	ıs Iour
Route	Destinations	Near Site	DIR	AM	PM
Metro 30/330	West Hollywood to East Los Angeles via Beverly	S. Soto Street, Mott	EB	3	2
	Hills, Los Angeles and Downtown Los Angeles	Street, E. 1 <sup>st</sup> Street	WB	2	3
Metro 68	Los Angeles to Montebello via East Los Angeles	S. Soto Street, Cesar	EB	4	4
	and Monterey Park	E Chavez Avenue	WB	4	4
Metro 106	East Los Angeles to Boyle Heights	S. Soto Street, 4 <sup>th</sup>	EB	1	2
		Street	WB	1	2
Matra 251	Cypress Park to Lynwood via Lincoln Heights,	S. Soto Street, Cesar	NB	4	5
Wetro 251	Boyle Heights, Huntington Park and South Gate	1 <sup>st</sup> Street, 4 <sup>th</sup> Street	SB	3	5
	Poulo Heights to Montosito Heights via Lincoln	S. Soto Street, Cesar	NB	3	3
Metro 252	Heights and El Sereno	E Chavez Avenue, E. 1st Street, 4 <sup>th</sup> Street	SB	3	3
		S. Soto Street, Cesar	NB	4	4
Metro 605	Boyle Heights	E Chavez Avenue, E. 1 <sup>st</sup> Street, 4 <sup>th</sup> Street	SB	4	4
	Livertington Dark to Current Dark via David	S. Soto Street, Cesar	NB	4	4
Metro 751	Huntington Park to Cypress Park via Boyle Heights and Lincoln Heights	E Chavez Avenue, E. 1 <sup>st</sup> Street, 4 <sup>th</sup> Street	SB	5	4
Matua 770	El Monte to Downtown Los Angeles via South El	S. Soto Street, Cesar	EB	4	6
Metro 770	Monte, Monterey Park and East Los Angeles	E Chavez Avenue	WB	5	5
Metro Gold	East Los Angeles to Azusa via Los Angeles,	S Soto Street E 1 <sup>st</sup>	EB	8	8
Line	Highland Park, South Pasadena, Pasadena, Arcadia, Monrovia, Duarte and Irwindale	Street	WB	8	8
Montebello	Whittier to Downtown Los Angeles via	S. Soto Street, 4 <sup>th</sup>	EB	6	5
Line 40	Montebello, East Los Angeles and Boyle Heights	Street	WB	5	5
			Total	81	86
Sources: Los Ange	les County Metropolitan Transportation Authority (Metro)	and City of Montebello Bus	S Lines webs	sites, 2(	018.

Table VI-25 Existing Transit Route

**Bicycle Facilities** 

Bicycle access to the Project Site is facilitated by the City of Los Angeles bicycle roadway network. Existing or proposed bicycle facilities (e.g., Class I Bicycle Path, Class II Bicycle Lanes, Class III Bicycle Routes, Proposed Bicycle Routes, Bicycle Friendly Streets, etc.) in the City's 2010 Bicycle Plan are located within an approximate one-mile radius from the Project Site. It is important to note that the 2010 Bicycle Plan goals and policies have been folded into the Mobility 2035 Plan to reflect a commitment to a balanced, multi-modal viewpoint. The Project Site is situated in a fairly flat area near downtown Los Angeles. Bicycling as a transportation mode can be accommodated especially when used in combination with transit opportunities in the Project Site area.

LAMC Section 12.21.A.16(A)(2) requires new projects to provide bicycle parking spaces. As shown in Table VI-26, the Project would require 60 bicycle parking spaces including 53 long term spaces and 7 short term spaces. The Project would include 66 bicycle parking spaces including 54 long term spaces and 12 short term spaces. Thus, the Project meets the LAMC requirements and would not conflict with implementation of bicycle facilities and infrastructure as set forth in the 2010 Bicycle Master Plan. Impacts would be less than significant and no mitigation measures are required.

Bicycle Parking Summary					
Type of Parking	Parking Requirement	Units	Spaces Required		
Residential					
Long-Term	1 space/unit 1-25		25		
	1 space/1.5 units	26-64	26		
Short-Term	1 space/ 10 units 1-25		2.5		
	1 space/15 units 26-64		2.6		
Commercial					
Long-Term	1 space/2,000 sf	2,443	2		
Short-Term	1 space/2,000 sf	2,443	2		
Bicycle Parking Required	53 Long Term + 7 Short Term				
<b>Bicycle Parking Provided</b>	54 Long Term + 12 Short Term				
sf = square feet					
Source: Gonzalez Goodale Architects, 2019.					

Table VI-26				
<b>Bicycle Parking Summary</b>				

# b) Would the project Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

**Less Than Significant Impact.** The Congestion Management Program (CMP) was established statewide in 1990 to implement Proposition 111, tying appropriation of new gas tax revenues to congestion reduction efforts. CMP is managed at the countywide level and primarily uses an LOS performance metric, which is inconsistent with more recent state efforts to transition to VMT-based performance metrics. California Government Code Section 65088.3 allows counties to opt out of CMP requirements without penalty, if a majority of local jurisdictions representing a majority of a county's population formally adopt resolutions requesting to opt out of the program.

On June 20, 2018, Los Angeles County Metropolitan Transportation Authority (Metro) initiated a process to gauge the interest of local jurisdictions in opting out of State CMP requirements. On July 30, 2019, the Los Angeles City Council passed a resolution to opt out of the CMP program, and on August 28, 2019, Metro announced that the thresholds had been reached and the County of Los Angeles had opted to be exempt from CMP. As such, the provisions of CMP no longer apply to any of the 89 local jurisdictions in Los Angeles County. Accordingly, CMP analysis is no longer included in City of Los Angeles environmental documents. The VMT analysis is provided below.

#### VMT

Section 15064.3 was recently added to the State CEQA Guidelines, which describes specific considerations for evaluating a project's transportation impacts. Section 15064.3(b) establishes VMT as the most appropriate measure of transportation impacts, shifting away from the use of LOS analysis that evaluates

a project's impacts on traffic conditions at nearby roadways and intersections. Section 15064.3(c) states that, while a lead agency may elect to be governed by the provisions of Section 15064.3 immediately, it is not required to do so until July 1, 2020.

The Project is infill development that would provide residential and commercial/retail uses within an existing urban area. Infill development generally reduces VMT compared to greenfield development.<sup>86</sup> As a mixed-use development in the downtown area, the project would not create a substantial increase in VMT. This conclusion is supported by the following summary of the per capita VMT analysis. The full VMT analysis is provided in Appendix J.

According to the City's Transportation Assessment Guidelines, a development project's daily vehicle trips should be estimated using the City's VMT Calculator. The proposed Project, which includes both residential (multi-family units and affordable housing [family-type] units) and commercial (office and retail) uses, would have a potential impact if it meets the following:

- "For residential projects, the project would generate household VMT per capita exceeding 15% below the existing average household VMT per capita for the Area Planning Commission (APC) area in which the project is located."
- "For office projects, the project would generate work VMT per employee exceeding 15% below the existing average work VMT per employee for the Area Planning Commission (APC) area in which the project is located."

The project's estimated household VMT per capita and work VMT per employee are compared to the average household VMT per capita and work VMT per employee for the corresponding APC. Different VMT significance thresholds have been established for each APC boundary area as the characteristics of each are distinct in terms of land use, density, transit availability, employment, etc. See Table A of Appendix J. The Project is in the East Los Angeles APC, so the VMT impact criteria (i.e., 15% below APC average) applicable to the proposed project is 7.2 daily household VMT per capita and 12.7 daily work VMT per employee.

Based on the City's VMT Calculator, the estimated household VMT per capita for the project is 5.4 household VMT per capita and the work VMT per employee is not applicable based on the City's TAG and VMT Calculator (see Appendix J). It is noted that other than accounting for the proposed Project providing on-site bicycle parking pursuant to City Code requirements, no transportation demand management measures, trip reduction strategies, or project design features have been included in the estimation of the Project's VMT. Therefore, based on the City's threshold criteria for the East Los Angeles APC (see Appendix J), the proposed Project is not forecast to result in a significant household VMT per capita or work VMT per employee impact.

# c) Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

**Less Than Significant Impact.** The Project as designed does not include development of any new roadways or intersections. The Project driveway would be located on the east side of the existing alleyway along the

<sup>&</sup>lt;sup>86</sup> Perkins Coie. 2019. California Land Use and Development Law Report – Legal Commentary on planning and Development. "New Guidelines for Assessing Transportation Impacts Under CEQA Finalized. Accessible at: https://www.californialandusedevelopmentlaw.com/2019/01/07/new-regulations-for-assessingtransportation-impacts-under-ceqa-finalized/. Accessed October 2019.

westerly property frontage, at the southwest corner of the Project Site. The project driveway would accommodate left-turn and right-turn vehicular ingress and egress turning movements. The Project Site driveway would be located to provide direct access to and from the subterranean parking level. The project site driveway would be required to be constructed to City of Los Angeles design standards. The Soto Station's Plaza would be designed to incorporate new landscaping and hardscaping to ensure pedestrian mobility is maintained. Pedestrian access to the residential units would be from the ground floor residential lobby accessible from the Metro Soto Station Plaza. Additionally, the ground floor commercial uses would be accessible from the Metro Soto Station Plaza and S. Soto Street frontage. Access to residential and commercial uses would be available via elevators and stairways in the parking levels.

The Project would include 66 bicycle parking spaces including 54 long term spaces and 12 short term spaces. The bicycle spaces would be provided in the subterranean garage and Metro Soto Station Plaza. Outdoor bicycle spaces would encourage use and maintain visibility for personal safety and theft protection. Appropriate lighting will be provided to increase safety and provide theft protection during night-time parking.

Based on the discussion above, the Project would not substantially increase hazards for vehicles, pedestrians, and bicyclists accessing the Project Site due to a geometric design feature. Impacts related to hazards would be less than significant and no mitigation measures are required.

#### d) Would the project result in inadequate emergency access?

**Less Than Significant Impact.** For the purpose of this issue, a significant impact may occur if a project design does not provide emergency access meeting the requirements of LAFD or LAPD, or threatened the ability of emergency vehicles to access and serve the project site or adjacent uses.

As previously discussed, there are no critical facilities, lifeline systems, or disaster routes in the immediate vicinity of the Project Site.<sup>87,88</sup> However, E. 1<sup>st</sup> Street and S. Soto Street are classified as Secondary Disaster Routes by Los Angeles County.<sup>89</sup> Nonetheless, as discussed in above, the Project would not result in any significant traffic impacts. Moreover, the Project would not cause permanent alterations to vehicular circulation routes and patterns, or impede public access or travel upon public rights-of-way. An emergency response plan would be submitted to LAFD during review of plans as part of the standard building permit process. Furthermore, no full road closures are anticipated during construction of the Project, and none of the surrounding roadways would be impeded. Access for emergency service providers and any evacuation routes would be maintained during construction and operation. Impacts related to inadequate emergency access would be less than significant and no mitigation is required.

#### Cumulative Impacts

**Less Than Significant Impact.** With respect to construction traffic, it is unknown whether or not any of the related projects would have overlapping construction schedules with the Project. However, similar to the Project, the related projects would be required to submit formal construction staging and traffic control

<sup>&</sup>lt;sup>87</sup> City of Los Angeles Department of City Planning, Los Angeles City General Plan Safety Element, Exhibit H, Critical Facilities & Lifeline Systems in the City of Los Angeles, Adopted November 1996.

<sup>&</sup>lt;sup>88</sup> Ibid.

<sup>&</sup>lt;sup>89</sup> Los Angeles County Department of Public Works, Disaster Route Maps, City of Los Angeles West Area, website: http://dpw.lacounty.gov/dsg/disasterroutes/map/disaster\_rdm-South.pdf, accessed: August 2019.

plans for review and approval by the City prior to the issuance of construction permits. The Work Site Traffic Control Plan would identify all traffic control measures, signs, delineators, and work instructions through the duration of construction activities. It is reasonably anticipated that the related projects would comply with a similar plan, and as such, the cumulative construction traffic impact would be less than significant and no mitigation measures are required.

Existing traffic, related projects' traffic, Project traffic, and a one percent per year ambient growth factor were added together to estimate future cumulative traffic volumes. As shown above, the future traffic volumes of the related projects and ambient growth with and without the Project would not result in significant impacts. Therefore, the cumulative traffic operational impact would be less than significant and no mitigation measures are required.

#### **18. TRIBAL CULTURAL RESOURCES**

- a) Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
  - (i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?

#### Less Than Significant Impact.

Tribal Cultural Resources (TCR) includes sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe that are eligible for inclusion in the California Register or included in a local register of historical resources. Public Resources Code Section 21084.2 establishes that "[a] project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment." A project would cause a substantial adverse change in the significance of a tribal cultural resource score change in the significance of a tribal cultural resource with cultural value to a California Native American tribe if such resource is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or if such resource is determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. PRC 5024.1(c) states that "[a] resource may be listed as an historical resource in the California Register if it meets any of the following National Register of Historic Places criteria:

- 1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- 2. Is associated with the lives of persons important in our past.
- 3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
- 4. Has yielded, or may be likely to yield, information important in prehistory or history.

Although the Project Site is located in a highly urbanized area of the Boyle Heights Community Plan Area of the City of Los Angeles, and has been disturbed by past development activities, the Project includes subgrade preparation that would involve the excavation and export of approximately 12,908 cubic yards of soil. Thus, the potential exists for the unanticipated discovery of archaeological materials. Because the

presence or absence of such materials cannot be determined until the site is excavated, as discussed in Section VI.5, Cultural Resources, a Records Search was conducted by the California Historical Resources Information System - South Central Coastal Information Center on June 26, 2019. The CHRIS Historic Records Search is available as Appendix B. The search concluded there are no previously identified historical resources on the site, however, it was recommended that the Native American Heritage Commission (NAHC) be consulted to identify if any additional traditional cultural properties or other sacred sites are known to be in the area. As such, a record search of the NAHC Sacred Lands File was completed for the area of potential project affect (APE) on June 28, 2019 (Appendix I).

Several lines of evidence, including the Sacred Lands File search, indicate that the potential exists for unrecorded tribal cultural resources in the form of buried features or artifacts, as well as Native American burials in the Project area. The potential for impacts to tribal cultural resources exists only in those places where the Project activities are likely to encounter alluvial sediments. As discussed in the Geotechnical Investigation, artificial fill was encountered at a maximum depth of 4.5 feet below the existing ground surface, and alluvial fan deposits were encountered beneath the artificial fill. The Project would likely result in deeper excavations than previously performed on the site, including excavation to depths up to 11 feet below grade to construct the subterranean parking structure. Therefore, excavations would penetrate through the existing artificial fill and expose competent alluvial soils throughout the excavation bottom. Where proposed ground disturbances are proposed exclusively within artificial fill, any tribal cultural resources that might be present in the underlying alluvium would remain preserved, and Project-related impacts would be avoided. Because there is a potential for previously unknown cultural resources to be present in the Project area, mitigation measures MM TCR-1 through TCR-4 are required.

The Project would also be required to follow procedures detailed in California Public Resources Code Section 21083.2. The required mitigation and regulatory compliance would ensure any found deposits are treated in accordance with federal, State, and local guidelines, including those set forth in PRC Section 21083.2. As discussed in Section IV., RTP/SCS Program EIR Mitigation Measures, the Project incorporates by reference and is consistent with SCAG 2016-2040 RTP/SCS Mitigation Measure MM RTP/SCS-CUL-2(b). Compliance with regulatory requirements and with the Project-specific mitigation measure fulfils the RTP/SCS mitigation measure and goes beyond the scope of MM RTP/SCS-CUL-2(b).

#### Mitigation Measure

**MM TCR-1** Prior to commencing any ground disturbance activities at the Project site, the Applicant, or its successor, shall retain archeological monitors and tribal monitors that are qualified to identify subsurface tribal cultural resources. Ground disturbance activities shall include excavating, digging, trenching, plowing, drilling, tunneling, quarrying, grading, leveling, removing peat, clearing, driving posts, augering, backfilling, blasting, stripping topsoil or a similar activity at the Project site. Any qualified tribal monitor(s) and archaeological monitor(s) shall be approved by the Department of City Planning, Office of Historic Resources ("OHR").

The qualified archeological and tribal monitors shall observe all ground disturbance activities on the Project site at all times the ground disturbance activities are taking place. If ground disturbance activities are simultaneously occurring at multiple locations on the Project site, an archeological and tribal monitor shall be assigned to each location where the ground disturbance activities are occurring. The on-site monitoring shall end when the ground disturbing activities are completed, or when the archaeological and tribal

monitor both indicate that the site has a low potential for impacting tribal cultural resources.

Prior to commencing any ground disturbance activities, the archaeological monitor in consultation with the tribal monitor, shall provide Worker Environmental Awareness Program (WEAP) training to construction crews involved in ground disturbance activities that provides information on regulatory requirements for the protection of tribal cultural resources. As part of the WEAP training, construction crews shall be briefed on proper procedures to follow should a crew member discover tribal cultural resources during ground disturbance activities. In addition, workers will be shown examples of the types of resources that would require notification of the archaeological monitor and tribal monitor. The Applicant shall maintain on the Project site, for City inspection, documentation establishing the training was completed for all members of the construction crew involved in ground disturbance activities.

In the event that any subsurface objects or artifacts that may be tribal cultural resources are encountered during the course of any ground disturbance activities, all such activities shall temporarily cease within the area of discovery, the radius of which shall be determined by a qualified archeologist, in consultation with a qualified tribal monitor, until the potential tribal cultural resources are properly assessed and addressed pursuant to the process set forth below:

- Upon a discovery of a potential tribal cultural resource, the Applicant, or its successor, shall immediately stop all ground disturbance activities and contact the following: (1) all California Native American tribes that have informed the City they are traditionally and culturally affiliated with the geographic area of the proposed Project; (2) and OHR.
- 2. If OHR determines, pursuant to Public Resources Code Section 21074 (a)(2), that the object or artifact appears to be a tribal cultural resource in its discretion and supported by substantial evidence, the City shall provide any affected tribe a reasonable period of time, not less than 14 days, to conduct a site visit and make recommendations to the Applicant, or its successor, and the City regarding the monitoring of future ground disturbance activities, as well as the treatment and disposition of any discovered tribal cultural resources.
- 3. The Applicant, or its successor, shall implement the tribe's recommendations if a qualified archaeologist retained by the City and paid for by the Applicant, or its successor, in consultation with the tribal monitor, reasonably conclude that the tribe's recommendations are reasonable and feasible.
- 4. In addition to any recommendations from the applicable tribe(s), a qualified archeologist shall develop a list of actions that shall be taken to avoid or minimize impacts to the identified tribal cultural resources substantially consistent with best practices identified by the Native American Heritage Commission and in compliance with any applicable federal, state or local law, rule or regulation.
- 5. If the Applicant, or its successor, does not accept a particular recommendation determined to be reasonable and feasible by the qualified archaeologist or qualified tribal monitor, the Applicant, or its successor, may request mediation by a mediator

agreed to by the Applicant, or its successor, and the City. The mediator must have the requisite professional qualifications and experience to mediate such a dispute. The City shall make the determination as to whether the mediator is at least minimally qualified to mediate the dispute. After making a reasonable effort to mediate this particular dispute, the City may (1) require the recommendation be implemented as originally proposed by the archaeologist or tribal monitor; (2) require the recommendation, as modified by the City, be implemented as it is at least as equally effective to mitigate a potentially significant impact; (3) require a substitute recommendation be implemented that is at least as equally effective to mitigate a potentially significant impact; or (4) not require the recommendation be implemented because it is not necessary to mitigate an significant impacts to tribal cultural resources. The Applicant, or its successor, shall pay all costs and fees associated with the mediation.

- 6. The Applicant, or its successor, may recommence ground disturbance activities outside of a specified radius of the discovery site, so long as this radius has been reviewed by both the qualified archaeologist and qualified tribal monitor and determined to be reasonable and appropriate.
- 7. The Applicant, or its successor, may recommence ground disturbance activities inside of the specified radius of the discovery site only after it has complied with all of the recommendations developed and approved pursuant to the process set forth in paragraphs 2 through 5 above.
- 8. Copies of any subsequent prehistoric archaeological study, tribal cultural resources study or report, detailing the nature of any significant tribal cultural resources, remedial actions taken, and disposition of any significant tribal cultural resources shall be submitted to the South Central Coastal Information Center (SCCIC) at California State University, Fullerton and to the Native American Heritage Commission for inclusion in its Sacred Lands File.
- 9. Notwithstanding paragraph 8 above, any information that the Department of City Planning, in consultation with the City Attorney's Office, determines to be confidential in nature shall be excluded from submission to the SCCIC or provided to the public under the applicable provisions of the California Public Records Act, California Public Resources Code, section 6254(r), and handled in compliance with the City's AB 52 Confidentiality Protocols.

The Project would also be required to follow procedures detailed in California Public Resources Code Section 21083.2. Adherence to the required mitigation and regulatory compliance measures would ensure any found deposits are treated in accordance with federal, State, and local guidelines, including those set forth in PRC Section 21083.2. Therefore, impacts would be less than significant after mitigation.

(ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) to Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of

# Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

**Less Than Significant Impact.** PRC Section 21074 provides a definition of a TCR. In brief, in order to be considered a TCR, a resource must be either: 1) listed, or determined to be eligible for listing, on the national, State, or local register of historic resources, or 2) a resource that the lead agency chooses, in its discretion supported by substantial evidence, to treat as a TCR. In the latter instance, the lead agency must determine that the resource meets the criteria for listing in the State register of historic resources or City Designated Cultural Resource. As mentioned above, a TCR includes sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe that are eligible for inclusion in the California Register or included in a local register of historical resources. A substantial adverse change to a TCR is a significant effect on the environment under CEQA. In applying those criteria, a lead agency shall consider the value of the resource to the tribe.

As previously discussed under Question 5.b), the Project Site Project Site and immediately surrounding area do not contain any known archaeological sites or archaeological survey areas. <sup>90</sup> However, a Sacred Lands File search conducted by in June 2019 the NAHC on behalf of the Project yielded positive results; and the Project includes subgrade preparation that would involve the excavation and export of approximately 12,908 cubic yards of soil. Thus, the potential exists for the accidental discovery of archaeological materials. Because the presence or absence of such materials cannot be determined until the site is excavated, and because there is a potential for previously unknown cultural resources to be present in the Project area, mitigation measure MM TCR-1 is required.

Additionally, in the event of unforeseen and inadvertent discovery of TCRs, the Project would be required to comply with PRC Section 21074. In the event that objects or artifacts that may be TCRs are encountered during the course of any ground-disturbance activities, all such activities would temporarily cease on the Project Site until the potential TCRs are properly assessed following specific protocol required by the Department of City Planning. Implementation of mitigation measure MM TCR-1 and compliance with PRC Section 21074 would mitigate any potentially significant impact, and impacts would be less than significant.

#### **Cumulative Impacts**

**Less Than Significant Impact.** Impacts related to tribal cultural resources tend to be site-specific and are assessed on a site-by-site basis. Many of the cumulative projects identified would require redevelopment of properties in urban areas that are currently developed and have been previously disturbed, and the potential to encounter and cause a significant impact on tribal cultural resources is diminished. The City would require the applicants of each of the related projects to assess, determine, and mitigate any potential impacts related to tribal cultural resources that could occur as a result of development, as necessary. As discussed previously, through implementation of MM TCR-1 and compliance with existing laws and the City's conditions of approval, Project impacts associated with tribal cultural resources would be less than significant. However, the occurrence of these impacts would be limited to the Project Site and would not contribute to any potentially significant cultural resources impacts that could occur at the

<sup>&</sup>lt;sup>90</sup> City of Los Angeles, Citywide General Plan Framework Final Environmental Impact Report, certified August 2001, Figure CR-1, Prehistoric and Historic Archaeological Sites and Survey Areas in the City of Los Angeles.

sites of the related projects. As such, the Project would not contribute to any potential cumulative impacts related to tribal cultural resources.

#### **19. UTILITIES AND SERVICE SYSTEMS**

a) Would the project require or result in the relocation or construction of new or expanded water, or wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities or expansion of existing facilities, the construction or relocation of which could cause significant environmental effects?

#### Less Than Significant Impact.

#### Water

The City of Los Angeles Department of Water and Power (LADWP) currently supplies water to the Project Site. LADWP is responsible for ensuring that water demand within the City is met and that State and federal water quality standards are achieved. LADWP ensures the reliability and quality of its water supply through an extensive distribution system that includes more than 7,300 miles of pipelines and 119 storage tanks and reservoirs within the City.<sup>91</sup> Much of the water flows north to south, entering the City at the Los Angeles Aqueduct Filtration Plant (LAAFP), which is owned and operated by LADWP, in the community of Sylmar. The LAAFP has the capacity to treat approximately 600 million gallons per day (mgd).<sup>92</sup>

The Project's estimated water consumption is presented on Table VI-27, Estimated Average Daily Water Consumption. As shown, the Project would consume a total of approximately 9,774 gallons per day (gpd) (0.01 mgd), or approximately 10.95 acre-feet of water per year (AF/Y). Thus, implementation of the Project is not expected to measurably reduce LAAFP's capacity, and as such, no new or expanded water treatment facilities would be required. According to LADWP, the Project Site can be supplied with water from the municipal system subject to the Water System's rules of the LADWP.<sup>93</sup>

Land Use	Size	Consumption Rate <sup>a</sup>	Total Water Consumed (gpd)	Total Water Consumed (AF/Y)
Studio apartments	13 du	90 gpd/du	1,170	1.31
One-bedroom apartments	18 du	132 gpd/du	2,376	2.66
Two-bedroom apartments	17 du	180 gpd/du	3,060	3.43
Three-bedroom apartments	16 du	190 gpd/du	3,040	3.41

# Table VI-27 Estimated Average Daily Water Consumption

<sup>&</sup>lt;sup>91</sup> Los Angeles Department of Water and Power, About Us, Water, Facts & Figures, website: https://www.ladwp.com/ladwp/faces/ladwp/aboutus/a-water/a-w-factandfigures?\_adf.ctrlstate=u39sz92qb\_21&\_afrLoop=273163065504125, accessed: August 2019.

<sup>&</sup>lt;sup>92</sup> Better Buildings, U.S. Department of Energy, Showcase Project: Los Angeles Aqueduct Filtration Plant Modernization-Oxygen Plant Replacement, website: https://betterbuildingssolutioncenter.energy.gov/showcase-projects/los-angeles-aqueduct-filtration-plantmodernization-%E2%80%93-oxygen-plant-replacement, accessed: August 2019.

<sup>&</sup>lt;sup>93</sup> Letter correspondence from Liz Gonzalez, Manager – Business Arrangements, Water Distribution Engineering, City of Los Angeles Department of Water and Power, July 10, 2019. (Appendix H)

Land Use	Size	Consumption Rate <sup>a</sup>	Total Water Consumed (gpd)	Total Water Consumed (AF/Y)		
Retail	4,265 sf	30 gpd/1,000 sf	128	0.14		
		Project Total:	9,774	10.95		
Notes: sf = square feet; du = dwelling units; cf = cubic feet; gpd = gallons per day; AF/Y = acre-feet per year. Some numbers have been rounded.						

Table VI-27 **Estimated Average Daily Water Consumption** 

<sup>a</sup> Based on 120% of rates provided in LADWP's Sewage Facilities Charge, Sewage Generation Factor for Residential and Commercial Categories, April 6, 2012.

In addition to supplying water for domestic uses, LADWP also supplies water for fire protection services, in accordance with the Fire Code. City of Los Angeles Fire Department (LAFD) requires a water flow of 6,000 to 9,000 gallons per minute (gpm). The existing water lines that currently serve the Project Site would serve the Project. If water main or infrastructure upgrades are required, the LAMC requires the Project Applicant to pay for such upgrades, which would be constructed by either the Project Applicant or LADWP. To the extent such upgrades result in a temporary disruption in service, proper notification to LADWP customers would take place, as is standard practice. In the event that water main and other infrastructure upgrades are required, it would not be expected to create a significant impact to the physical environment because: (1) any disruption of service would be of a short-term nature, (2) replacement of the water mains would be within public rights-of-way, and (3) any foreseeable infrastructure improvements would be limited to the immediate Project vicinity.

Furthermore, the Project would comply with the City's mandatory water conservation measures that, relative to the City's increase in population, have reduced the rate of water demand in recent years. LADWP's growth projections are based on conservation measures and adequate treatment capacity that is, or would be, available to treat LADWP's projected water supply, as well as the LADWP's expected water sources. Compliance with water conservation measures, including Title 20 and 24 of the California Administrative Code would serve to reduce the projected water demand. Chapter XII of LAMC comprises the City's Emergency Water Conservation Plan. The Emergency Water Conservation Plan stipulates conservation measures pertaining to water closets, showers, landscaping, maintenance activities, and other uses. At the State level, Title 24 of the California Administrative Code contains the California Building Standards, including the California Plumbing Code (Part 5), which promotes water conservation. Title 20 of the California Administrative Code addresses Public Utilities and Energy and includes appliance efficiency standards that promote conservation. Various sections of the Health and Safety Code also regulate water use. Impacts would be less than significant and no mitigation measures are required.

#### Wastewater

The City's Bureau of Sanitation provides sewer service to the Project area. The Project Site has existing sewer connections to the City's sewer system due to previous development. Sewage from the Project Site is conveyed via existing sewer infrastructure to the HTP. Since 1987, the HTP has had capacity for full secondary treatment. Currently, the plant treats an average daily flow of 275 mgd on a dry weather day,

and has capacity to treat 450 mgd. <sup>94</sup> This equals a remaining capacity of 175 mgd of wastewater able to be treated at the HTP.

Estimated Project wastewater generation is presented below in Table VI-28, Estimated Average Daily Wastewater Generation. As shown, the Project would generate approximately 8,652 gpd (0.009 mgd) or approximately 9.69 AF/Y of wastewater. Therefore, the HTP would have adequate capacity to serve the Project.

Land Use	Size	Consumption Rate <sup>a</sup>	Total Water Consumed (gpd)	Total Water Consumed (AF/Y)
Studio apartments	13 du	75 gpd/du	975	1.09
One-bedroom apartments	18 du	110 gpd/du	1980	2.22
Two-bedroom apartments	17 du	150 gpd/du	2550	2.86
Three-bedroom apartments	16 du	190 gpd/du	3040	3.41
Retail	4,265 sf	25 gpd/1,000 sf	107	0.12
		Project Total:	8,652	9.69

Table VI-28 Estimated Average Daily Wastewater Generation

Notes: sf = square feet; du = dwelling units; cf = cubic feet; gpd = gallons per day; AF/Y = acre-feet per year. Some numbers have been rounded.

<sup>a</sup> Based on rates provided in LADWP's Sewage Facilities Charge, Sewage Generation Factor for Residential and Commercial Categories, April 6, 2012.

The existing wastewater system appears able to accommodate the total flow for the Project; however, further detailed gauging would be needed as part of the permit process to identify a specific sewer connection point.<sup>95</sup> If deficiencies are identified during the building permit process, the Project Applicant would be required, at their own cost, to build secondary sewer lines to a connection point in the sewer system with sufficient capacity, in accordance with standard City procedures. The installation of any such secondary lines, if needed, would require minimal trenching and pipeline installation, which would be a temporary action and would not result in any adverse environmental impacts. Impacts would be less than significant and no mitigation measures are required.

#### Electricity

As discussed previously in Section VI.6, electric service is available and will be provided to the Project Site in accordance with LADWP regulations and the Project is part of the total growth load forecast for the City and has been taken into account in the planned growth of the power system.<sup>96</sup> Impacts would be less than significant and no mitigation measures are required.

<sup>&</sup>lt;sup>94</sup> City of Los Angeles Department of Public Works, Bureau of Sanitation, Hyperion Water Reclamation Plant, website: https://www.lacitysan.org/san/faces/wcnav\_externalld/s-lsh-wwd-cw-p-hwrp?\_adf.ctrlstate=6icwss7n\_1440&\_afrLoop=9645810457499202#!, accessed: August 2019.

<sup>&</sup>lt;sup>95</sup> Letter correspondence from Karan Patel, CE Associate, Central District, Bureau Engineering, July 9, 2019. (Appendix H)

<sup>&</sup>lt;sup>96</sup> Letter correspondence from Jeffrey T. Bergman, District Engineer, Metro East Service Planning, July 2, 2019. (Appendix H)

#### Natural Gas

As discussed previously in Section VI.6, SCG will provide gas service to the Project in accordance with the rules and regulations in effect at the time service is provided.<sup>97</sup> SCG is satisfactorily meeting its obligations to its current customers and projects to meet obligations of its future customers. As such, SCG's existing infrastructure and storage supplies are well-prepared for the long-term forecasts, including the Project. Impacts would be less than significant and no mitigation measures are required.

#### Telecommunications

The Project Site is within the Base Rate Area of the AT&T California serving area in the Los Angeles 6 Exchange. AT&T expects to be in a position to provide telephone service to the Project upon request in accordance with requirements of, and at the rates and charges specified in, its Tariffs that are on file with the California Public Utilities Commission.<sup>98</sup> The Project Site is also within the service area of Charter Communications which may serve the Project Site after conducting a survey of the property.<sup>99</sup> There are no existing cellular towers located adjacent to the Project Site and no cellular towers are proposed by the Project. The Project would not result in the relocation of expansion of telecommunication facilities. Impacts would be less than significant and no mitigation measures are required.

# b) Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

**Less Than Significant Impact**. The City's water supply primarily comes from the Los Angeles-Owens River Aqueduct, State Water Project, and from the Metropolitan Water District of Southern California (MWD), which is obtained from the Colorado River Aqueduct, and to a lesser degree from local groundwater sources. MWD uses a land use based planning tool that allocates projected demographic data from SCAG into water service areas for each of MWD's member agencies. MWD's demographic projections use data reported in SCAG's 2016–2040 RTP/SCS. These sources, along with recycled water, are expected to supply the City's water needs in the years to come. LADWP's 2015 Urban Water Management Plan (UWMP) projects a supply of 644,700 AF/Y in 2025 and of 675,700 AF/Y in 2040.<sup>100</sup> With LADWP's current water supplies, planned future water conservation, and planned future water supplies, LADWP will be able to reliably provide water to its customers through the 25-year planning period covered by the 2015 UWMP. Any shortfall in LADWP controlled supplies (e.g., groundwater, recycled, conservation, or aqueduct) is offset with MWD purchases to rise to the level of demand.<sup>101</sup> As shown in Table VI-27, above, the Project would consume approximately 9,774 gpd (10.95 AF/Y) of water. This amount represents approximately 0.002 percent of the projected 2040 supply.

LADWP's Water System 10-Year Capital Improvement Program for the Fiscal Years 2010-2019 details LADWP's 10-year process of capital upgrades to the water infrastructure system of the City. Through this

<sup>&</sup>lt;sup>97</sup> Letter correspondence from Oscar Mariscal, Pipeline Planning Assistant, SoCalGas-Compton HQ, July 16, 2019. (Appendix H)

<sup>&</sup>lt;sup>98</sup> Letter correspondence from Troy Stanard, AT&T Engineering, July 2, 2019. (Appendix H)

<sup>&</sup>lt;sup>99</sup> Letter correspondence from Dianna Netherlain, SoCal Central Specialist, Business Development, July 3, 2019. (Appendix H)

<sup>&</sup>lt;sup>100</sup> City of Los Angeles Department of Water and Power, Urban Water Management Plan 2015, adopted June 7, 2016, website: file:///C:/Users/PES/Downloads/2015%20Urban%20Water%20Management%20Plan-LADWP%20(2).pdf, accessed: August 2019.

<sup>&</sup>lt;sup>101</sup> Ibid.
program, LADWP can provide reliable sources of water to the residents of the City.<sup>102</sup> Thus, sufficient water supplies are anticipated to be available to serve the Project from existing entitlements and resources, and new or expanded entitlements would not be necessary. Moreover, the Project's land uses, density, and intensity are consistent with projected Citywide growth. Thus, the Project's estimated water usage is within overall General Plan projections and would not exceed the amount anticipated by the City's long-range land use and planning efforts. As there would be sufficient water supplies available to serve the Project, impacts regarding supply would be less than significant, and no mitigation measures are required.

c) Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

**Less Than Significant Impact**. As discussed above, sewage from the Project Site is conveyed via existing sewer infrastructure to the HTP. Since 1987, the HTP has had capacity for full secondary treatment. Currently, the plant treats an average daily flow of 275 mgd on a dry weather day, and has capacity to treat 450 mgd.<sup>103</sup> This equals a remaining capacity of 175 mgd of wastewater able to be treated at the HTP.

Estimated Project wastewater generation is presented below in Table VI-28, Estimated Average Daily Wastewater Generation. As shown, the Project would generate approximately 8,652 gpd (0.009 mgd) or approximately 9.69 AF/Y of wastewater. Therefore, the HTP would have adequate capacity to serve the Project. The Project would have a less than significant impact with respect on wastewater treatment capacity and no mitigation measures are required.

- d) Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?
- e) Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less Than Significant Impact. The following discussion incorporates responses to both thresholds, 19d and 19e. Solid waste generated within the City is disposed of at privately-owned landfill facilities throughout Los Angeles County. While the Bureau of Sanitation provides waste collection services to single-family and some small multi-family developments, private haulers provide waste collection services for most multi-family residential and commercial developments within the City. It is reasonably anticipated, then, that the Project Applicant would contract with a local commercial solid waste hauler following completion of the Project. As is typical for most solid waste haulers in the greater Los Angeles Area, the hauler would most likely separate and recycle all reusable material collected from the Project Site at a local materials recovery facility. The remaining solid waste would be disposed of at a variety of

<sup>&</sup>lt;sup>102</sup> City of Los Angeles Department of Water and Power, Water System Ten-Year Capital Improvement Program for the Fiscal Years 2010-2019, website: file:///C:/Users/PES/Downloads/WSO%20Capital%20Book.pdf, accessed: August 2019.

<sup>&</sup>lt;sup>103</sup> City of Los Angeles Department of Public Works, Bureau of Sanitation, Hyperion Water Reclamation Plant, website: https://www.lacitysan.org/san/faces/wcnav\_externalld/s-lsh-wwd-cw-p-hwrp?\_adf.ctrlstate=6icwss7n\_1440&\_afrLoop=9645810457499202#!, accessed: August 2019.

landfills, depending on with whom the hauler has contracts. Most commonly, the City is served by the Sunshine Canyon Landfill. This Class III landfill accepts non-hazardous solid waste including construction and demolition (C&D) waste. As of 2017 the Sunshine Canyon Landfill permits a daily intake of 12,100 tons, and has a remaining capacity of 68.0 million tons.<sup>104</sup> As of 2017 the Azusa Land Reclamation Company Landfill is the only permitted Inert Waste Landfill in the County that has a full solid waste facility permit. This landfill permits a daily intake of 6,500 tons, and has a remaining capacity of 55.7 million tons.<sup>105</sup> Chiquita Canyon Landfill is also a Class III landfill accepting non-hazardous solid waste including C&D waste that serves the area. As the Chiquita Canyon Landfill has approached its max capacity the Los Angeles County Board of Supervisors approved a Conditional Use Permit (CUP) for the Landfill, which became effective on July 28, 2017. The new CUP limits the Landfill's amount of all incoming material, including beneficial use, to an average of 8,974 tons-per day until the end of 2024.<sup>106</sup>

#### Construction

As the Project Site is vacant, the Project would not result in a significant amount of demotion waste. However, implementation of the Project would generate construction waste. Construction debris includes concrete, asphalt, wood, drywall, metals, concrete rubble, and other miscellaneous and composite materials. Table VI-29, Estimated Project Construction Solid Waste, presents the Project's estimated construction waste.

Construction Activity	Size	Generation Rate <sup>a</sup>	Total Solid Waste Generated
Residential Construction	73,680 sf	4.39 lbs/sf	323,455 (162 tons)
Commercial Construction	4,265 sf	4.34 lbs/sf	18,510 (9 tons)
<b>Total:</b> 341,965 lbs (171 tons)			
Notes: sf = square feet; lbs = pounds			
<sup>a</sup> Source: United States Environmental Protection Agency, Estimating 2003 Building-Related Construction and Demolition			

Table VI-29 Estimated Project Construction Solid Waste

Material Amounts, March 2009, Table 2-1 (Residential Construction) and Table 2-2 (Nonresidential Construction).

As shown in Table VI-29, the Project would generate approximately 341,965 pounds or 171 tons of solid waste debris during construction. Building construction would occur over approximately 19 months, or 418 work days, thereby generating approximately 0.4 tons per day.

This forecasted solid waste generation is a conservative estimate as it assumes no reductions in solid waste generation would occur due to recycling. In order to help meet the landfill diversion goals, the City adopted the Citywide C&D Waste Recycling Ordinance (Ordinance No. 181,519). This ordinance, which became effective January 1, 2011, requires that all haulers and contractors responsible for handling C&D waste obtain a Private Solid Waste Hauler Permit from the Bureau of Sanitation prior to collecting, hauling,

 <sup>104</sup> Los Angeles County Department of Public Works, Countywide Integrated Waste Management Plan, 2017 Annual Report, published April 2019, Appendix E-1, website: https://dpw.lacounty.gov/epd/swims/ShowDoc.aspx?id=6530&hp=yes&type=PDF, accessed: August 2019.

<sup>&</sup>lt;sup>105</sup> Ibid.

<sup>&</sup>lt;sup>106</sup> Los Angeles County Solid Waste Management Committee/Integrated Waste Management Task Force, Inside Solid Waste, Vol. 91, Published August 2018, website: https://dpw.lacounty.gov/epd/tf/isw/isw\_2018\_08.pdf, accessed: August 2019.

and transporting C&D waste. It requires that all C&D waste generated within City limits be taken to City certified C&D waste processors, where the waste would be recycled to the extent feasible. Moreover, there are 60 million tons of remaining capacity available in Los Angeles County for the disposal of inert waste. Some C&D waste may also be landfilled at the Class III landfill identified above. Thus, Project-generated C&D waste would represent a very small percentage of the waste disposal capacity in the region, and, as noted, the aggregate amount estimated in the above table would not all be landfilled since the Project would comply with City's recycling requirements to the extent feasible. Impacts related to solid waste disposal during construction would be less than significant.

#### Operation

The Project's estimated operational solid waste generation is presented in Table VI-30, Estimated Project Operational Solid Waste.

Land Use	Size	Generation Rate <sup>a</sup>	Total Solid Waste Generated (lbs/day)
Residential	64 units	12.23 lbs/unit	783
Commercial	12 employees <sup>b</sup>	10.53 lbs/employee	126
		Project Total:	909
Notes: sf = square feet; lbs = pounds;			
<sup>a</sup> L.A. CEQA Thresholds Guide, 2006, page M.3-2.			
<sup>b</sup> Based on a generation rate of one employee per 369 square feet of neighborhood shopping center (4,265/369). Source: Los Angeles Unified School District, 2016 Developer Fee Justification Study, March 2017.			

Table VI-30 Estimated Project Operational Solid Waste

In 2013, the City achieved a landfill diversion rate of 76.4 percent, which represents the highest recycling rate out of the 10 largest U.S. cities.<sup>107</sup> This landfill diversion rate exceeds the 75 percent diversion mandate by 2020 set forth in AB 374.<sup>108</sup> The Bureau of Sanitation's Solid Resources Citywide Recycling Division (SRCRD) develops and implements source reduction, recycling, and re-use programs in the City.<sup>109</sup> The SRCRD provides technical assistance to public and private recyclers, manages the collection and disposal programs for Household Hazardous Waste, and helps create markets for recycled materials.<sup>110</sup> Thus, at the City's diversion rate of 76.4 percent, the Project's total of 909 pounds per day of solid waste would likely result in approximately 695 pounds being recycled and the remaining 214 pounds (0.1 tons) would be landfilled per day. As such, there is adequate landfill capacity for the Project's operational impact. Furthermore, AB 341 requires multi-family residential developments with five units or more to provide for recycling services on site.

The Project would have a less than significant impact with respect to solid waste and no mitigation measures are required.

#### **Cumulative Impacts**

#### Water

**Less Than Significant Impact**. Implementation of the Project in combination with the related projects, along with other projects within the service area of LADWP, would generate demand for additional water supplies. In terms of the City's overall water supply condition, the water demand for any project that is consistent with the City's General Plan has been taken into account in LADWP's 2015 UWMP. The 2015 UWMP anticipates that the future water supplies would be sufficient to meeting existing and planned

<sup>110</sup> Ibid.

<sup>&</sup>lt;sup>107</sup> Los Angeles Bureau of Sanitation, Solid Resources, Recycling, website: https://www.lacitysan.org/san/faces/home/portal/s-lsh-wwd/s-lsh-wwd-s/s-lsh-wwd-s-r, accessed: August 2019.

<sup>&</sup>lt;sup>108</sup> California Department of Resources and Recycling, California's 75 Percent Initiative, website: https://www.calrecycle.ca.gov/calendar/75percent, accessed: August 2019.

<sup>&</sup>lt;sup>109</sup> Los Angeles Bureau of Sanitation, Solid Resources, Construction and Demolition Recycling Guide, website: https://www.lacitysan.org/san/faces/home/portal/s-lsh-wwd/s-lsh-wwd-s/s-lsh-wwd-s-r/s-lsh-wwd-s-r-cdr, accessed: August 2019.

growth in the City to the year 2040 (the planning horizon required of 2015 UWMPs) under wet and dry year scenarios. The Project would be consistent with the General Plan and the site's Community Plan land use designation, and therefore, has been taken into account in the 2015 UWMP. It is unknown whether or not the related projects or other developments in the LADWP service area have been taken into account in the 2015 UWMP. Nonetheless, it can be assumed that any development projects that are not included in the 2015 UWMP would be required to identify water supplies prior to project approval. In addition, larger projects with over 500 residential units would have to prepare a Water Supply Assessment (pursuant to SB 610) to be reviewed and certified by LADWP to demonstrate adequate water supply. Therefore, the cumulative impact would be less than significant.

With respect to water treatment facilities, the LAAFP has the capacity to treat approximately 600 million gallons per day (mgd).<sup>111</sup> Therefore, the LAAFP would have adequate capacity to serve the additional water demanded by the Project (which would consume 9,774 gpd) and the related projects.

With respect to water infrastructure, the potential need for future development projects to upgrade water lines to accommodate their water needs is site-specific and there is little, if any, cumulative relationship between the development of the Project and other development projects. As discussed above, the Project would have a less than significant impact on water infrastructure. Any upgrades to future development project's water infrastructure would be required to be implemented by the applicants those projects. Therefore, the cumulative impact would be less than significant.

#### Wastewater

**Less Than Significant Impact**. Implementation of the Project in combination with the related projects and other projects within the service area of the HTP would generate additional wastewater that would be treated at HTP. Currently, the HTP treats an average daily flow of 275 mgd on a dry weather day, and has capacity to treat 450 mgd.<sup>112</sup> This equals a remaining capacity of 175 mgd of wastewater able to be treated at the HTP. Therefore, the HTP would have adequate capacity to serve the additional wastewater demanded by the Project (0.009 mgd) and future development projects within the HTP service area.

With respect to wastewater infrastructure in the City, under the rules and regulations established in the City's Sewer Allocation Ordinance (Ordinance No. 166,060), the Bureau of Sanitation assesses the anticipated wastewater flows from development projects at the time of connection, and makes the appropriate decisions on how best to connect to the local sewer lines at the time of construction. The applicants for future development projects in the City will be required to submit a Sewer Capacity Availability Request to verify the anticipated sewer flows and points of connection and to assess the condition and capacity of the sewer lines receiving additional sewer flows from the Project and other cumulative development projects. If it is determined that the sewer system in the local area has insufficient capacity to serve a particular development, the developer of that project would be required to replace or build new sewer lines to a point in the sewer system with sufficient capacity to accommodate that project's increased flows. Each project would be evaluated on a case-by-case basis and would be

<sup>&</sup>lt;sup>111</sup> Better Buildings, U.S. Department of Energy, Showcase Project: Los Angeles Aqueduct Filtration Plant Modernization-Oxygen Plant Replacement, website: https://betterbuildingssolutioncenter.energy.gov/showcase-projects/los-angeles-aqueduct-filtration-plantmodernization-%E2%80%93-oxygen-plant-replacement, accessed: August 2019.

<sup>&</sup>lt;sup>112</sup> City of Los Angeles Department of Public Works, Bureau of Sanitation, Hyperion Water Reclamation Plant, website: https://www.lacitysan.org/san/faces/wcnav\_externalld/s-lsh-wwd-cw-p-hwrp?\_adf.ctrlstate=6icwss7n\_1440&\_afrLoop=9645810457499202#!, accessed: August 2019.

required to consult with the Bureau of Sanitation (for projects within the City) and comply with all applicable City and State water conservation programs and sewer allocation ordinances. Therefore, the cumulative impact would be less than significant.

#### Electricity

Implementation of the Project, in conjunction with the related projects, would increase demands for electrical power. As discussed above, LADWP utilizes renewable energy sources and is committed to meeting the requirement of the RPS Enforcement Program to use at least 50 percent of the State's energy from renewables by 2030. All new development in California is required to be designed and constructed in conformance with State Building Energy Efficiency Standards outlined in Title 24. It is possible that implementation of the related projects (and other development in the LADWP service area) could require the removal of older structures that were not designed and constructed to conform with the more recent and stringent energy efficiency standards. Nonetheless, the 2017 SLTRP considers a 20-year planning horizon to guide LADWP as it executes major new and replacement projects and programs. Through the SLTRP, the LADWP undertakes expansion or modification of electrical service infrastructure and distribution systems to serve future growth in the City as required in the normal process of providing electrical service. Any potential cumulative impacts related to electric power service would be addressed through this process. Therefore, cumulative impacts related to electricity supply and infrastructure would be less than significant.

#### Natural Gas

Implementation of the Project, in conjunction with the related projects, would increase demands for natural gas. Energy consumption by new buildings in California is regulated by the State Building Energy Efficiency Standards, embodied in Title 24 of the California Code of Regulations. The efficiency standards apply to new construction of both residential and non-residential buildings and regulate insulation, glazing, lighting, shading, and water- and space-heating systems. Building efficiency standards are enforced through the local building permit process. The City has adopted green building standards consistent with Title 24 as the LA Green Building Code. Similar to the Project, the related projects must also abide by the same statues, regulations, and programs that mandate or encourage energy conservation. SCG is also required to plan for necessary upgrades and expansion to its systems to ensure that adequate service will be provided for other projects. Specifically, SCG regularly updates its infrastructure reports as required by law. In addition, there is no evidence to suggest that SCG will not be able to serve its service areas in the coming years as SCG has determined it can meet projected demand. Therefore, cumulative impacts are less than significant.

#### Telecommunications

Telecommunications are regulated by the Federal Communications Commission (FCC) and the California Public Utilities Commission (CPUC). Each of the related projects would be reviewed by the City to identify necessary new facilities and service connections to meet their respective needs. The Project's contribution to cumulative impacts with respect to telecommunications as well as infrastructure would not be cumulatively considerable and, thus, would result in a less than significant cumulative impact

#### Solid Waste

**Less Than Significant Impact**. Implementation of the Project in combination with the related projects and other projects within the Southern California region that are serviced by area landfills will increase regional demands on landfill capacities. Construction of the Project and other development projects

generate C&D waste, resulting in a cumulative increase in the demand for inert (unclassified) landfill capacity. Given the requirements of the Citywide C&D Debris Recycling Ordinance (Ordinance No. 181,519), which requires all mixed C&D waste generated within City limits be taken to a City-certified C&D waste processor, it is anticipated that future cumulative development within the City would also implement similar measures to divert C&D waste from landfills. As mentioned previously, the City is most commonly served by the Sunshine Canyon Landfill. This Class III landfill accepts non-hazardous solid waste including C&D waste. As of 2017 the Sunshine Canyon Landfill permits a daily intake of 12,100 tons, and has a remaining capacity of 68.0 million tons.<sup>113</sup> Thus, this landfill would be expected to have sufficient capacity to accommodate cumulative demand.

Operation of the Project in conjunction with the related projects would generate municipal solid waste and result in a cumulative increase in the demand for waste disposal capacity at Class III landfills. The countywide demand for landfill capacity is continually evaluated by Los Angeles County through preparation of the County Integrated Waste Management Plan Annual Reports. Each Annual Report assesses future landfill disposal needs over a 15-year planning horizon. As such, the 2017 Annual Report (published April 2019 and the most recent available) projects waste generation and available landfill capacity through 2032.<sup>114</sup> Moreover, a State-mandated 75 percent landfill diversion rate is required by 2020, which would reduce the amount of solid waste being landfilled for the Project and related projects. Therefore, cumulative impacts from solid waste would be less than significant.

#### 20. WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:

#### a) Impair an adopted emergency response plan or emergency evacuation plan?

**No Impact.** The Project Site is not located in a Very High Fire Hazard Severity Zone;<sup>115</sup> nor is the Project Site within a wildland fire hazard area.<sup>116</sup> The Project Site is located in an established urban area that is well served by an existing roadway network. There are no critical facilities, lifeline systems, or disaster routes in the immediate vicinity of the Project Site.<sup>117,118</sup> However, E. 1<sup>st</sup> Street and S. Soto Street are classified as Secondary Disaster Routes by Los Angeles County.<sup>119</sup> Nonetheless, as discussed in Section VI.17, Transportation, above, the Project would not result in any significant traffic impacts. Moreover, the

<sup>&</sup>lt;sup>113</sup> Los Angeles County Department of Public Works, Countywide Integrated Waste Management Plan, 2017 Annual Report, published April 2019,, website: https://dpw.lacounty.gov/epd/swims/ShowDoc.aspx?id=6530&hp=yes&type=PDF, accessed: August 2019.

<sup>&</sup>lt;sup>114</sup> Ibid.

<sup>&</sup>lt;sup>115</sup> City of Los Angeles Department of City Planning Zone Information & Map Access System, website: http://zimas.lacity.org, accessed: August 2019.

<sup>&</sup>lt;sup>116</sup> City of Los Angeles Department of City Planning, Los Angeles City General Plan Safety Element, Exhibit D, Selected Wildfire Hazard Areas in the City of Los Angeles, Adopted November 1996.

<sup>&</sup>lt;sup>117</sup> City of Los Angeles Department of City Planning, Los Angeles City General Plan Safety Element, Exhibit H, Critical Facilities & Lifeline Systems in the City of Los Angeles, Adopted November 1996.

<sup>&</sup>lt;sup>118</sup> Ibid.

<sup>&</sup>lt;sup>119</sup> Los Angeles County Department of Public Works, Disaster Route Maps, City of Los Angeles West Area, website: http://dpw.lacounty.gov/dsg/disasterroutes/map/disaster\_rdm-South.pdf, accessed: August 2019.

Project would not cause permanent alterations to vehicular circulation routes and patterns, or impede public access or travel upon public rights-of-way. An emergency response plan would be submitted to LAFD during review of plans as part of the standard building permit process. Furthermore, no full road closures are anticipated during construction of the Project, and none of the surrounding roadways would be impeded. Access for emergency service providers and any evacuation routes would be maintained during construction and operation. Therefore, with respect to wildfire hazards, the Project construction would not result in the impairment of an adopted emergency response plan or emergency evacuation plan. No impact would occur and no mitigation measures would be required.

## b) Due to slope. Prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or uncontrolled spread of wildfire?

**No Impact**. The Project Site is not located in a Very High Fire Hazard Severity Zone;<sup>120</sup> nor is the Project Site within a wildland fire hazard area.<sup>121</sup> The Project is not located in a sloped area and is surrounded by urban development. As such, the Project would not exacerbate wildland risks, and would not expose occupants to pollutant concentrations from a wildfire or uncontrolled spread of a wildfire. No impact would occur and no mitigation measures would be required.

# c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water resources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.

**No Impact.** The Project Site is not located in a Very High Fire Hazard Severity Zone;<sup>122</sup> nor is the Project Site within a wildland fire hazard area.<sup>123</sup> The Project will not require the installation of infrastructure that may exacerbate fire risk. Project operation would generate traffic in the Project Site vicinity and would result in some modifications to access to the Project Site from the streets that surround it. However, adequate access to evacuation routes and emergency access to the Project Site and to the surrounding area would continue to be provided. Future driveway and building configurations would comply with applicable fire code requirements for emergency evacuation, including proper emergency exits for patrons, employees, and residents. Project Site access and circulation plans would be subject to review and approval by the LAFD. No impact would occur and no mitigation measures would be required.

<sup>&</sup>lt;sup>120</sup> City of Los Angeles Department of City Planning Zone Information & Map Access System, website: http://zimas.lacity.org, accessed: August 2019.

<sup>&</sup>lt;sup>121</sup> City of Los Angeles Department of City Planning, Los Angeles City General Plan Safety Element, Exhibit D, Selected Wildfire Hazard Areas in the City of Los Angeles, Adopted November 1996.

<sup>&</sup>lt;sup>122</sup> City of Los Angeles Department of City Planning Zone Information & Map Access System, website: http://zimas.lacity.org, accessed: August 2019.

<sup>&</sup>lt;sup>123</sup> City of Los Angeles Department of City Planning, Los Angeles City General Plan Safety Element, Exhibit D, Selected Wildfire Hazard Areas in the City of Los Angeles, Adopted November 1996.

## d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

**No Impact**. The Project Site is not located in a Very High Fire Hazard Severity Zone;<sup>124</sup> nor is the Project Site within a wildland fire hazard area.<sup>125</sup> The Project Site is surrounded by urban development and is not adjacent to any wildlands. As discussed in Section VI.10, *Hydrology and Water Quality*, according to the City of Los Angeles General Plan Safety Element, the Project Site is not located with a 100-Year or 500-Year flood plain. In addition, the Project Site is not located within the proximity of an enclosed body of water. The Project Site is relatively flat with little topography that would expose people or structures to landslides. With implementation of the Project, rainwater harvesting and/or bio-filtration flow-through planters would be provided and the overflow discharge would be discharged to S. Soto Street and E. 1<sup>st</sup> Street via a curb drain or parkway drain. The Project would not contain uses or activities that would exacerbate existing environmental conditions. As discussed in Section VI.7, *Geology and Soils*, the Project Site is not located within a landslide inventory area. As such, there is no impact in relation to risks associated with downslope or downstream flooding or landslides as a result of runoff or post fire slope instability or drainage changes. No impact would occur and no mitigation measures would be required.

#### **Cumulative Impacts**

**No Impact.** The related projects are all located highly urbanized areas, would not contain wildland features, and are not located adjacent to any wildland areas. Any related projects would be subject to established guidelines and building code regulations and construction procedures pertaining to fire and seismic hazards. All related projects would be subject to review by the LAFD for compliance with Fire Code and Building Code regulations related to emergency response, emergency access, and fire safety. As such, cumulative impacts would not be cumulatively considerable and there would be no impact..

#### 21. MANDATORY FINDINGS OF SIGNIFICANCE

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

**Less Than Significant.** The preceding analysis does not reveal any significant immitigable impacts to the environment. The Project Site is located within a highly urbanized area and two of the Project Site's parcels currently vacant. The other four Project parcels include the Metro Soto Station and Plaza. There is no Habitat Conservation Plan, Natural Community Conservation Plan, or other approved habitat conservation plan applies to the Project. No wildlife corridors, native wildlife nursery sites, or bodies of water in which fish are present are located on the Project Site or in the surrounding area.

However, the Project Site does include trees that could support raptor and/or songbird nests. Migratory nongame native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (50 C.F.R. Section 10.13). Sections 3503, 3503.5, and 3513 of the California Fish and

<sup>&</sup>lt;sup>124</sup> City of Los Angeles Department of City Planning Zone Information & Map Access System, website: http://zimas.lacity.org, accessed: August 2019.

<sup>&</sup>lt;sup>125</sup> City of Los Angeles Department of City Planning, Los Angeles City General Plan Safety Element, Exhibit D, Selected Wildfire Hazard Areas in the City of Los Angeles, Adopted November 1996.

Wildlife Code prohibit take of all birds and their active nests including raptors and other migratory nongame birds (as listed under the Federal MBTA). Project implementation would result in the loss of the existing trees on site. Therefore, the Project would comply with regulatory compliance measure RCM BIO-1 to ensure impacts to migratory birds are reduced. As such, impacts related to disturbance to nesting birds would be reduced to less than significant.

The Project would not eliminate important examples of the major periods of California history or prehistory. As discussed in Section VI.5, there are no historical resources on the Project Site and no historical resources would be demolished, altered, or relocated as a result of the Project.

Since Project-related excavation is expected to extend to approximately 11 feet below existing surface, it could encounter paleontological resources and result in a potentially significant impact to paleontological resources. However, construction-phase procedures would be implemented in the event any important archaeological or paleontological resources are discovered during grading and excavation activities, consistent with the prescribed Project specific mitigation measures. Overall, based on the preceding analysis of potential impacts, no evidence is presented that the Project would degrade the quality of the environment.

Impacts related to the substantial degradation of the environment would be less than significant.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

**Less Than Significant Impact.** As concluded throughout this SCEA, cumulative impacts related to all of the above environmental factors would be less than significant. No mitigation measures are required.

## c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?

**Less Than Significant.** Based on the preceding environmental analysis, the Project would not have significant environmental effects on human beings, either directly or indirectly. Any potentially significant impacts would be reduced to less-than-significant levels through either regulatory compliance and/or the implementation of project design features including PDF HAZ-1, the implementation of a soil vapor barrier, identified within this SCEA analysis. Impacts would be less than significant.

Appendix A

**Tree Report** 

### Los Lirios Apartments Arborist Report

Prepared for East LA Community Corporation Jacqueline Monterrosas 2917 E. 1st Street, Suite 101 Los Angeles, CA 90033

> Prepared by James Komen BCMA WE-9909B RCA #555

Class One Arboriculture 3763 Ramsdell Ave. Glendale, CA 91214 818-495-5344 classonearboriculture@gmail.com

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#### Background

I was contacted in September of 2018 by Jacqueline Monterrosas. She asked for me to prepare a Protected Tree Report per the requirements of the City of Los Angeles planning department. Two vacant parcels and a portion of an existing transit station were proposed for development into an apartment complex.

I visited the property on October 18, 2018 at 2pm to collect data for this report. I prepared a Protected Tree Report with my findings later that day.

In January of 2019, I was contacted by Lauren Quan of ELACC. She asked me to update the report to include the removal of several trees not originally marked for removal in the first report. I prepared an updated report on January 16, 2018 to reflect those changes.

In December of 2019, I was contacted by MaeKeng L. Chinn of GGA Architects. She asked me to update the report to include two new street trees that had been planted since I prepared my initial report. I visited the site again on December 16, 2019 at 2pm. I re-verified that all of the previously tagged and measured trees were still present and that the tree report reflected accurate data. I also photographed and measured the two new trees and added them to this report.

#### **Project Description**

An apartment complex will be constructed over two vacant lots and a portion of the Soto Metro Station. Several existing trees will be removed because they are growing within the footprint of the proposed project.

There are no protected trees on the subject property per Ordinance 177,404 covering native trees: Native Oaks (*Quercus sp.*), California Sycamore (*Platanus racemosa*), California Black Walnut (*Juglans californica*), and Bay Laurel (*Umbellularia californica*). There are nine London Planetrees (*Platanus x hispanica*) on the site. These trees share similar characteristics to the protected California Sycamore (*P. racemosa*), but their fruits are borne singly instead of in threes and fives, identifying them as the non-protected *P. x hispanica* and not the protected *P. racemosa* (See Figure 31).

There are no protected trees on neighboring properties that will be affected by the proposed construction.

### Subject Trees!

Tree 1
Handroanthus sp. – Trumpet Tree
This is a street tree. It shows signs of sunburn and a mechanical injury on the trunk. No treatment is recommended at this time. This tree is not likely to be affected by the proposed construction. This tree is far enough from the construction site that no tree protection fencing is needed.
Tree 2
Handroanthus sp. – Trumpet Tree
This is a street tree. It shows signs of sunburn and a mechanical injury on the trunk. No treatment is recommended at this time. This tree is not likely to be affected by the proposed construction. This tree is far enough from the construction site that no tree protection fencing is needed.
Tree 3
<i>Afrocarpus faicatus –</i> African Fern Pine
This tree is not protected. It has a buried root collar and a thinning canopy. This tree will be removed as part of the proposed construction.

Trac 1
African Form Dino
Afrocurpus jaicaius – African Fern Pine
This tree is not protected. It has a thinning canopy. This tree will be removed as part of the proposed construction.
Tree 5
Africanus falcatus $- \Delta$ frican Fern Dine
Africarpus jaicaius – African Petit Fille
This tree is not protected. It is leaning and has a thinning
construction.
Tree 6
Afrocarpus falcatus – African Fern Pine
This tree is not protected. It has a thinning canopy. This tree will be removed as part of the proposed construction
will be removed as part of the proposed construction.

Tree 7
Afrocarpus falcatus – African Fern Pine
This tree is not protected. It has a thinning canopy. This tree will be removed as part of the proposed construction.
<b>Tree 8</b> Afrocarpus falcatus – African Fern Pine
This tree is not protected. It is healthy. This tree will be removed as part of the proposed construction.
<b>Tree 9</b> <i>Platanus x hispanica</i> – London Plane Tree
This tree is not protected. It shows signs of minor anthracnose. It is still healthy. This tree will be removed as part of the proposed construction.

Tree 10
Afrocarpus falcatus – African Fern Pine
This tree is not protected. It has a thinning canopy This tree will be removed as part of the proposed construction.
<b>Tree 11</b> Afrocarpus falcatus – African Fern Pine
This tree is not protected. It is healthy. This tree will be removed as part of the proposed construction.
<b>Tree 12</b> Afrocarpus falcatus – African Fern Pine
This tree is not protected. It has a thinning canopy. This tree will be removed as part of the proposed construction.

Tree 13
Washingtonia robusta - Movioon Fon Dolm
washingtonia robusta – Wextean Pan Pann
This tree is not protected. It is healthy. This tree will be removed as part of the proposed construction.
Tree 14
Washingtonia robusta – Mexican Fan Palm
This tree is not protected. It is healthy. This tree will be removed as part of the proposed construction.
Tree 15
Washingtonia robusta – Mexican Fan Palm
This tree is not protected. It is healthy. This tree will be removed as part of the proposed construction.

Tree 16
<i>Washingtonia robusta</i> – Mexican Fan Palm
This tree is not protected. It is healthy. This tree will be
removed as part of the proposed construction.
Tree 17
We die de la de Marian Eau Dalas
<i>wasningtonia robusta</i> – Mexican Fan Palm
This type is not protected. It is healthy Drawing of dead from do
This tree is not protected. It is healthy. Pruning of dead fronds
is recommended. This tree will be retained in the landscape.
1
Trac 18
Washingtonia robusta – Mexican Fan Palm
This tree is not protected. It is healthy. Pruning of dead fronds
is recommended. This tree will be retained in the landscape
is recommended. This free will be retained in the fundscape.

T
Iree 19
Washingtonia robusta – Mexican Fan Palm
0
This tree is not protected. It is healthy. Pruning of dead fronds
is recommended. This tree will be retained in the landscore
is recommended. This tree will be retained in the landscape.
Tree 20
Platanus r hispanica I ondon Plane Trop
<i>Fiaianus x nispanica</i> – London Fiane file
This tree is not protected. It shows signs of minor
This ties is not protected. It shows signs of minor
anthracnose. It is still healthy. Crown raising to 10 feet is
recommended. This tree will be retained in the landscape
recommended. This free will be retained in the fandscape.
Tree 21
Platanus r hispanica I ondon Plana Trac
<i>r iaianus x nispanica</i> – London Plane Tree
This tree is not protected. It shows signs of minor
This tree is not protected. It shows sights of minor
anthracnose. It is still healthy. Crown raising to 10 feet is
recommended. This tree will be retained in the landscape
recommended. This dee will be relatived in the randscape.

T
Tree 22
<i>Platanus x hispanica</i> – London Plane Tree
1
This tree is not protected. It shows signs of minor
anthracnose. It is still healthy. Crown raising to 10 feet is
antificenose. It is still healthy. Crown faising to roteet is
recommended. This tree will be retained in the landscape.
Trac 23
Tree 25
<i>Platanus x hispanica</i> – London Plane Tree
*
This tree is not protected. It shows signs of anthracnose. This
tree will be removed as part of the proposed construction.
thee will be removed as part of the proposed construction.
Тгее 74
<i>Platanus x hispanica</i> – London Plane Tree
This tree is not protected. It shows signs of anthracnose. This
tree will be removed as part of the proposed construction.

TF 05
Tree 25
<i>Platanus x hispanica</i> – London Plane Tree
- · · · · · · · · · · · · · · · · · · ·
This tree is not protected. It shows signs of anthracnose. This
tree will be removed as part of the proposed construction.
Tree 26
Distance which arise I and on Diana Trac
<i>Platanus x hispanica</i> – London Plane Tree
This tree is not protected. It shows signs of anthropped. This
This life is not protected. It shows sight of anumachose. This
tree will be removed as part of the proposed construction.
Tree 27
Dlatanus r hispaniaa I ondon Dlana Trac
<i>Fiananus x hispanica</i> – London Plane Tree
This tree is not protected. It shows signs of anthropped. It has
This tiee is not protected. It shows sight of antifiactiose. It has
a bleeding canker and a mechanical injury on the trunk. This
tree will be removed as part of the proposed construction
dee will be removed as part of the proposed construction.

Tree OP28							
Svagrus romanzoffiana – Queen Palm							
This tree is not protected. It is growing on a neighboring property. It shows signs of minor drought stress. No treatm is recommended at this time. This tree is not likely to be affected by the proposed construction.							
Tree 29							
Podocarpus gracilior – Fern Pine							
This tree is a street tree. It was recently planted within the past year. It is healthy. No treatment is recommended at this time. This tree is not likely to be affected by the proposed construction if the tree protection fencing is not crossed.							
TE							
Pistacia chinensis – Chinese Pistache							
This tree is a street tree. It was recently planted within the past year. It is healthy. No treatment is recommended at this time. This tree is not likely to be affected by the proposed construction if the tree protection fencing is not crossed.							

Matrix	of All	Trees	On	Site
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Tree #	Tag #	Species	Common Name	DBH	Height	Spread	Condition	Treatment	Rating	Protect	Remove	Natural
1	843	Handroanthus sp.	Trumpet Tree	4"	15'	10'	Sunburn, trunk mechanical injury	none	B-	Street	No	No
2	844	Handroanthus sp.	Trumpet Tree	2.5"	12'	8'	Sunburn, trunk mechanical injury	none	C-	Street	No	No
3	845	Afrocarpus falcatus	African Fern Pine	6"	24'	15'	Buried root collar, thinning canopy	Remove tree	в	No	Yes	No
4	486	Afrocarpus falcatus	African Fern Pine	7"	24'	15'	Thinning canopy	Remove tree	В	No	Yes	No
5	487	Afrocarpus falcatus	African Fern Pine	6"	22'	15'	leaning, thinning canopy	Remove tree	В	No	Yes	No
6	848	Afrocarpus falcatus	African Fern Pine	7"	24'	15'	Thinning canopy	Remove tree	В	No	Yes	No
7	849	Afrocarpus falcatus	African Fern Pine	5.5"	25'	15'	Thinning canopy	Remove tree	В	No	Yes	No
8	850	Afrocarpus falcatus	African Fern Pine	6"	25'	15'	healthy	Remove tree	А	No	Yes	No
9	851	Platanus x hispanica	London Plane Tree	4.5"	18'	15'	Minor anthracnose, still healthy	Remove tree	A-	No	Yes	No
10	852	Afrocarpus falcatus	African Fern Pine	5.5"	20'	15'	thinning canopy	Remove tree	В	No	Yes	No
11	853	Afrocarpus falcatus	African Fern Pine	7"	25'	15'	healthy	Remove tree	А	No	Yes	No
12	854	Afrocarpus falcatus	African Fern Pine	8"	20'	15'	Thinning canopy	Remove tree	В	No	Yes	No
13	855	Washingtonia robusta	Mexican Fan Palm	11"	35'	10'	Healthy	Remove tree	А	No	Yes	No
14	856	Washingtonia robusta	Mexican Fan Palm	11"	35'	10'	Healthy	Remove tree	А	No	Yes	No
15	857	Washingtonia robusta	Mexican Fan Palm	11"	35'	10'	Healthy	Remove tree	А	No	Yes	No
16	858	Washingtonia robusta	Mexican Fan Palm	11"	35'	10'	Healthy	Remove tree	А	No	Yes	No
17	859	Washingtonia robusta	Mexican Fan Palm	11"	35'	10'	Healthy	Prune dead fronds	А	No	No	No
18	860	Washingtonia robusta	Mexican Fan Palm	11"	35'	10'	Healthy	Prune dead fronds	А	No	No	No
19	861	Washingtonia robusta	Mexican Fan Palm	11"	35'	10'	Healthy	Prune dead fronds	А	No	No	No
20	862	Platanus x hispanica	London Plane Tree	5"	20'	20'	Minor anthracnose, still healthy	Crown raising to 10 feet	A-	No	No	No
21	863	Platanus x hispanica	London Plane Tree	3.5"	20'	15'	Anthracnose, thinning canopy	Crown raising to 10 feet	B-	No	No	No
22	864	Platanus x hispanica	London Plane Tree	4"	20'	10'	anthracnose, thinning canopy	Crown raising to 10 feet	B-	No	No	No
23	865	Platanus x hispanica	London Plane Tree	3.5"	20'	10'	anthracnose	Remove tree	В	No	Yes	No
24	866	Platanus x hispanica	London Plane Tree	4"	20'	15'	anthracnose	Remove tree	В	No	Yes	No
25	867	Platanus x hispanica	London Plane Tree	3.5"	20'	10'	anthracnose	Remove tree	В	No	Yes	No
26	868	Platanus x hispanica	London Plane Tree	4.5"	20'	15'	anthracnose	Remove tree	В	No	Yes	No
27	869	Platanus x hispanica	London Plane Tree	4"	20'	10'	anthracnose, bleeding canker, mechanical injury on trunk	Remove tree	B-	No	Yes	No
OP28	No ta	Syagrus romanzoffiana	Queen Palm	~10"	26'	15'	Minor drought stress	None	в	No	No	No
29	29904	Podocarpus gracilior	Fern Pine	1"	8'	4'	Healthy	None	А	street	No	No
30	29895	Pistacia chinensis	Chinese Pistache	1.5"	10'	5'	Healthy	None	А	street	No	No

**Protected Trees** There are no protected trees.

**Protected Trees to be Removed** No protected trees will be removed.

#### **Protected Trees to Remain on Site**

There are no protected trees.

#### **Mitigation Trees**

No protected trees will be removed, so no mitigation trees are required.

#### **Recommendations and Construction Impact Guidelines**

- Erect construction fencing around the perimeter of the project footprint to exclude pedestrians at the Metro Station. This fencing will also exclude construction equipment from the publicly accessible side where the trees intended for preservation will be. There is already a fence at the property line near Tree OP28, so as long as the property line is not crossed, that tree is unlikely to be affected by construction as well. Also erect tree protection fencing around the perimeter of the drip lines of Trees 29 and 30.!
- Inform all construction personnel of the intention to preserve the trees marked for preservation. Many times damage occurs because workers are not aware of the importance of preserving the trees on site. This includes contractors and their respective subcontractors as well.!
- If any changes are made to the plans resulting in any new excavation or equipment access within the drip line of any tree, the project arborist should be informed. Additional protection measures may need to be discussed.!
- If any injury should occur to a tree during construction, the project arborist should be informed within 24 hours so it may be evaluated and treated as soon as possible.!

#### Limitations

My observations are based on a strictly visual inspection of the property, and some hidden or buried symptoms and signs may not have been observed. I did not conduct excavation, coring, or climbing inspection to make observations. My analysis is only based on the observations I gathered at the time of inspection. I do not guarantee the safety of the subject trees. There is no warranty or guarantee, expressed or implied, that problems or deficiencies may not arise in the future.

Arborists are tree specialists who use their knowledge, education, training, and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living trees. Clients may choose to accept or disregard the recommendations of the arborist, or to seek additional advice.

Arborists cannot detect every condition that could possibly lead to structural failure of a tree. Trees are living organisms that fail in ways not fully understood. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like any medicine, cannot be guaranteed.

Treatment, pruning, and removal of trees may involve considerations beyond the scope of the arborist's services such as property boundaries, property ownership, site lines, disputes between neighbors, and other issues. Arborists cannot take such considerations into account unless complete and accurate information is disclosed to the arborist. An arborist should then be expected to reasonably rely upon the completeness and accuracy of the information provided.

Trees can be managed, but they cannot be controlled. To live near trees is to accept some degree of risk. The only way to eliminate all risk associated with trees is to eliminate all trees.



**Figure 1**: Site map of the subject trees. Trees that are not a protected species are shown in grey. Trees marked for removal are shown in red."

**Site Photos** 

! **Figure 3** : Tree 2 is a street tree. It is not likely to be affected by the proposed construction.

! **Figure 4**: Tree 3 is not protected. It will be removed.

! **Figure 5**: Tree 4 is not protected. It will be removed.

! **Figure 6**: Tree 5 is not protected. It will be removed.

! **Figure 7**: Tree 6 is not protected. It will be removed.

! **Figure 8**: Tree 7 is not protected. It will be removed.
! **Figure 9**: Tree 8 is not protected. It will be removed.

! **Figure 10**: Tree 9 is not protected. It will be removed.

! **Figure 11**: Tree 10 is not protected. It will be removed.

! **Figure 12**: Tree 11 is not protected. It will be removed.

! **Figure 13**: Tree 12 is not protected. It will be removed.

! **Figure 14**: Tree 13 is not protected. It will be removed.

! **Figure 15**: Tree 14 is not protected. It will be removed.

! **Figure 16**: Tree 15 is not protected. It will be removed.

! **Figure 17**: Tree 16 is not protected. It will be removed.

! **Figure 18**: Tree 17 is not protected. It will be retained in the landscape.

! **Figure 19**: Tree 18 is not protected. It will be retained in the landscape.

! **Figure 20**: Tree 19 is not protected. It will be retained in the landscape.

! **Figure 21**: Tree 20 is not protected. It will be retained in the landscape.

! **Figure 22**: Tree 21 is not protected. It will be retained in the landscape.

! **Figure 23**: Tree 22 is not protected. It will be retained in the landscape.

! **Figure 24**: Tree 23 is not protected. It will be removed.

! **Figure 25**: Tree 24 is not protected. It will be removed.

! **Figure 26**: Tree 25 is not protected. It will be removed.

! **Figure 27**: Tree 26 is not protected. It will be removed.

! **Figure 28**: Tree 27 is not protected. It will be removed.

# !

**Figure 29**: Tree OP28 is not protected. It is growing on a neighboring property. It is unlikely to be affected by the proposed construction.

Figure 30: Tree 29 is a street tree. It will be preserved through construction.

!

Figure 31: Tree 30 is a street tree. It will be preserved through construction."

!

!

Figure 32: There are no trees on the southern lots.

!

**Figure 33**: The fruits on Tree 21 are born singly indicating London Plane Tree (*P. x hispanica*). The leaves have shallow lobes and the lobes are more angular than those of the protected *P. racemosa*.

Appendix B

**Historic Records Search** 

# South Central Coastal Information Center

California State University, Fullerton Department of Anthropology MH-426 800 North State College Boulevard Fullerton, CA 92834-6846 657.278.5395

California Historical Resources Information System

Los Angeles, Orange, Ventura and San Bernardino Counties sccic@fullerton.edu

6/26/2019

SCCIC File #: 20353.7089

Brandie Gordon Bridge Housing 5120 W Goldleaf circle, Suite 120 Los Angeles CA 90056

Re: Record Search Results for the Los Lirios Mixed-Use Project

The South Central Coastal Information Center received your records search request for the project area referenced above, located on the Los Angeles, CA USGS 7.5' quadrangle. The following summary reflects the results of the records search for the project area and a ½-mile radius. The search includes a review of all recorded archaeological and built-environment resources as well as a review of cultural resource reports on file. In addition, the California Points of Historical Interest (SPHI), the California Historical Landmarks (SHL), the California Register of Historical Resources (CAL REG), the National Register of Historic Places (NRHP), the California State Historic Properties Directory (HPD), and the City of Los Angeles Historic-Cultural Monuments (LAHCM) listings were reviewed for the above referenced project site and a ¼-mile radius. Due to the sensitive nature of cultural resources, archaeological site locations are not released.

#### **RECORDS SEARCH RESULTS SUMMARY**

Archaeological Resources*	Within project area: 0
(*see note below)	Within

	Within project area: 1
	Within ¼-mile radius: 22
OHP Historic Properties Directory	Within project area: 0
(HPD)	Within ¼-mile radius: 42
California Points of Historical	Within project area: 0
Interest (SPHI)	Within ¼-mile radius: 0
California Historical Landmarks	Within project area: 0
(SHL)	Within ¼-mile radius: 0
California Register of Historical	Within project area: 0
Resources (CAL REG)	Within ¼-mile radius: 11

National Register of Historic Places	Within project area: 0
(NRHP)	Within ¼-mile radius: 2
Archaeological Determinations of	Within project area: 0
Eligibility (ADOE):	Within ½-mile radius: 0
City of Los Angeles Historic-	Within project area: 0
Cultural Monuments (LAHCM)	Within ¼-mile radius: 3

**HISTORIC MAP REVIEW** - Pasadena, CA (1896, 1900) 15' USGS historic maps indicate that in 1896 there was no visible development within the project area. There was visibly dense development within a ½-mile radius which included several buildings and roads. In addition, there were two intermittent streams and the historic place name of Brooklyn Heights. In 1900, there was little to no visible change and all previously mentioned features still remained.

### RECOMMENDATIONS

The ground surface of the project area is significantly disturbed, but buried cultural resources may remain. At least two structures appeared to be standing on the subject property in 2004. By 2005, they were demolished. Given the age of the adjacent standing structures and the remaining character of the neighborhood, the demolished structures were likely in excess of 50 years old and may have been from the late 1800s. There also were two recorded archaeological sites within a ¼-mile radius of the project site – one of which was adjacent to the project site. Therefore, in order to assess archaeological sensitivity, an archaeological monitor should be retained to monitor ground-disturbing activities. In the event that cultural resources are observed, all work within the vicinity of the find should be diverted until the archaeologist can assess and record the find and make recommendations. Finally, it is also recommended that the Native American Heritage Commission be consulted to identify if any additional traditional cultural properties or other sacred sites are known to be in the area. The NAHC may also refer you to local tribes with particular knowledge of potential sensitivity. The NAHC and local tribes may offer additional recommendations to what is provided here and may also request an archaeological monitor.

For your convenience, you may find a professional consultant\*\*at <u>www.chrisinfo.org</u>. Any resulting reports by the qualified consultant should be submitted to the South Central Coastal Information Center as soon as possible.

\*\*The SCCIC does not endorse any particular consultant and makes no claims about the qualifications of any person listed. Each consultant on this list self-reports that they meet current professional standards.

If you have any questions regarding the results presented herein, please contact the office at 657.278.5395 Monday through Thursday 9:00 am to 3:30 pm. Should you require any additional information for the above referenced project, reference the SCCIC number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

Thank you for using the California Historical Resources Information System,

Isabela Kott GIS Technician

\*=When we report that no archaeological resources are recorded in your project area or within a specified radius around the project area; that does not necessarily mean that nothing is there. It may simply mean that the area has not yet been studied and that no information regarding the archaeological sensitivity of the property is available. The reported records search result does not preclude the possibility that surface or buried artifacts may be found during a survey of the property or ground-disturbing activities.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the California Historical Resources Information System (CHRIS) Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

The California Office of Historic Preservation (OHP) contracts with the California Historical Resources Information System's (CHRIS) regional Information Centers (ICs) to maintain information in the CHRIS inventory and make it available to local, state, and federal agencies, cultural resource professionals, Native American tribes, researchers, and the public. Recommendations made by IC coordinators or their staff regarding the interpretation and application of this information are advisory only. Such recommendations do not necessarily represent the evaluation or opinion of the State Historic Preservation Officer in carrying out the OHP's regulatory authority under federal and state law. Appendix C

Air Quality and Noise Report

Air Quality & Noise Analyses Los Lirios Mixed-Use Project 119, 121, 113 S. Soto Street & 2316, 2322 E. 1<sup>st</sup> Street Los Angeles, California 90033

**Prepared by:** 



Contact: Brett Pomeroy 25101 The Old Road, Suite 246 Santa Clarita, California 91381 T: (661) 388-2422 www.pomeroyes.com

April 2019

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Appendix B: Noise Monitoring Data

### 1.0 INTRODUCTION

The purpose of this report is to examine the degree to which the Project may result in significant environmental impacts with respect to air quality emissions and noise and vibration. Both short-term construction emissions occurring from activities such as site grading and haul truck trips, and operational emissions of the Project are discussed in this report. The potential for the Project to conflict with or obstruct implementation of the applicable air quality plan, to violate an adopted air quality standard or contribute substantially to an existing or projected air quality violation, to result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is designated to be in non-attainment, to expose sensitive receptors to substantial pollutant concentrations, or to create objectionable odors affecting a substantial number of people are discussed herein. Additionally, this report includes an evaluation of potential impacts associated with substantial temporary and permanent increases in ambient noise levels in the vicinity of the Project Site; exposure of people in the vicinity of the Project Site to excessive noise or groundborne vibration levels; and whether exposure is in excess of standards established in the City. This report can be attached to or kept on file for CEQA documentation.

### 2.0 PROJECT OVERVIEW

The Project Site is located at 113, 119 and 121 S. Soto Street, and 2316 and 2322 E. 1<sup>st</sup> Street in the Boyle Heights Community Plan area of the City. The Project Site is 48,656 square feet (1.06 acres) in size and does not contain any existing structures. However, part of the Project Site is within the Metro Soto Station Plaza. See Figure 1, Aerial Photograph of the Project Site. The Project proposes the development of a 5-story mixed-use affordable housing building including 64<sup>1</sup> residential units, 4,265 square feet of ground floor commercial uses, and 56 parking spaces and one loading space in one level of subterranean parking. See Figure 2, Project Site Plan. Approximately 12,908 cubic yards of soil and debris will be exported. This analysis assumes the Project will be operational in 2021.

The Project Site is near the S. Soto Street and E. 1<sup>st</sup> Street intersection. The site is zoned C2-1-CUGU and RD1.5-1-CUGU and has a General Plan Designation of "Low Medium II Residential" and "Highway Oriented and Limited Commercial." Developments within the vicinity of the Project Site consist primarily of single-family and multi-family residences, and commercial uses along E. 1<sup>st</sup> Street. The Project is served by Metro bus lines 251, 252, 605, 751, and 30/330 and would be incorporated into the Metro Soto Station Plaza which provides service for the Metro Gold Line.

<sup>&</sup>lt;sup>1</sup> The Project originally proposed 66 dwelling units, which was analyzed in the Project's Transportation Impact Study (Linscott Law & Greenspan, July 2018). Accordingly, this Air Quality and Noise Report reflects the data from the Project's Transportation Impact Study. It should also be noted that the reduction of two units compared to what is analyzed herein, would result in slightly reduced impacts. Thus, this analysis represents a worst-case scenario.





Figure 2 Project Site Plan

### 3.0 AIR QUALITY ANALYSIS

Consistent with Appendix G of the State CEQA Guidelines, a significant impact may occur if a project would:

- a) Conflict with or obstruct implementation of the applicable air quality plan;
- b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard;
- c) Expose sensitive receptors to substantial pollutant concentrations; and/or
- d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

**a)** A significant air quality impact may occur if a project is not consistent with the applicable Air Quality Management Plan (AQMP), or would in some way represent a substantial hindrance to employing the policies, or obtaining the goals, of that plan.

The South Coast Air Quality Management District SCAQMD is directly responsible for reducing emissions from stationary (area and point), mobile, and indirect sources to meet federal and State ambient air quality standards. It has responded to this requirement by preparing a series of Air Quality Management Plans (AQMPs). The most recent of these was adopted by the Governing Board of the SCAQMD on March 3, 2017. This AQMP, referred to as the 2016 AQMP, was prepared to comply with the federal and State Clean Air Acts and amendments, to accommodate growth, to reduce the high levels of pollutants in the Basin, to meet federal and State air quality standards, and to minimize the fiscal impact that pollution control measures have on the local economy. The 2016 AQMP identifies the control measures that will be implemented over a 15-year horizon to reduce major sources of pollutants. Implementation of control measures established in the previous AQMPs has substantially decreased the population's exposure to unhealthful levels of pollutants, even while substantial population growth has occurred within the Basin. The future air quality levels projected in the 2016 AQMP are based on several assumptions. For example, the SCAQMD assumes that general new development within the Basin will occur in accordance with population growth and transportation projections identified by the Southern California Association of Governments (SCAG) in its most current version of the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), which was adopted April 7, 2016. The 2016 AQMP also assumes that general development projects will include strategies (mitigation measures) to reduce emissions generated during construction and operation in accordance with SCAQMD and local jurisdiction regulations, which are designed to address air quality impacts and pollution control measures.

For development projects, SCAQMD recommends that consistency with the current AQMP be determined by comparing the population generated by a project to the population projections used in the development of the AQMP. As mentioned above, the Project is located within the Boyle Heights
Community Plan area. As part of the City's General Plan, the Boyle Heights Community Plan (Community Plan) was adopted in 1998 and sets forth goals, objectives, policies, and implementation programs that pertain to the Boyle Heights. The Community Plan offers projections for population, housing, and employment for the area up to the year 2010. Since the Project is expected to become operational in 2021 this report analyzes compliance with the AQMP through SCAG's population estimates in the 2016 RTP/SCS as they are the most current estimates. Projects that are consistent with SCAG's applicable growth projections would not interfere with air quality attainment because this growth is included in the projections used in the formulation of the 2016 AQMP. As such, projects, land uses, and activities that are consistent with the applicable assumptions used in the development of the AQMP would not jeopardize attainment of the air quality levels identified in the AQMP. The Project would comply with all SCAQMD rules and regulations that are applicable to the Project; the Project Applicant is not requesting any exemptions from the currently adopted or proposed SCAQMD rules.

The Project proposes the development of a 5-story mixed-use affordable housing building including 64 residential units, 4,265 square feet of ground floor commercial uses, and 56 parking spaces and one loading space in one level of subterranean parking. As part of its comprehensive planning process for the Southern California region, SCAG has divided its jurisdiction into 14 subregions. The Project Site is located within the City of Los Angeles subregion, which includes all areas within the boundaries of the City of Los Angeles. SCAG's 2012 housing estimates for the City are 1,325,500 total housing units and estimates the housing of the City will increase to 1,690,300 housing units by 2040, a 27.5 percent increase.<sup>2</sup> The Project's addition of 64 housing units would account for less than 0.02 percent of the total growth from 2012 to 2040. Thus, the Project's relatively small increase in housing would not have the potential to conflict with the regional growth projections for the Los Angeles subregion. In addition, and further discussed herein, the Project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. Thus, the Project would not impair implementation of the AQMP, and this impact would be less than significant.

**b)** A significant impact may occur if a project would add a considerable cumulative contribution to federal or State non-attainment pollutant. Measurements of ambient concentrations of the criteria pollutants are used by the U.S. EPA and the California Air Resources Board (ARB) to assess and classify the air quality of each air basin, county, or, in some cases, a specific urbanized area. The classification is determined by comparing actual monitoring data with national and State standards. If a pollutant concentration in an area is lower than the standard, the area is classified as being in "attainment." If the pollutant exceeds the standard, the area is classified as a "non-attainment" area. If there is not enough data available to determine whether the standard is exceeded in an area, the area is designated "unclassified." Attainment

<sup>&</sup>lt;sup>2</sup> Southern California Association of Governments, 2016-2040 Regional Transportation Plan/Sustainable Communities Strategies, Demographics and Growth Forecast Appendix, Adopted April 2016, website: http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS\_DemographicsGrowthForecast.pdf, page 24 accessed: April 2019.

status of the Basin with regard to the national ambient air quality standards (NAAQS) and California ambient air quality standards (CAAQS) are shown in Table 1, Attainment Status for the South Coast Air Basin. As shown, the Basin is in nonattainment for ozone,  $PM_{10}$  and  $PM_{2.5.}$ 

	Attainment Sta	itus
Pollutant	NAAQS	CAAQS
Ozone (1-Hour)	Non-Attainment (Extreme)	Non-Attainment
Ozone (8-Hour)	Pending – Expect Non-Attainment	Non-Attainment
	(Extreme)	
Carbon Monoxide (1- & 8-hour)	Attainment (Maintenance)	Attainment
Nitrogen Dioxide (1-Hour)	Unclassifiable/Attainment	Attainment
Nitrogen Dioxide (Annual)	Attainment (Maintenance)	Attainment
Sulfur Dioxide (1-Hour)	Designations Pending	Attainment
	(expect Unclassified/Attainment)	
Sulfur Dioxide (24-Hour & Annual)	Unclassified/Attainment	attainment
PM <sub>10</sub> (24-Hour)	Attainment (Maintenance)	Non-Attainment
PM10 (Annual)	N/A	Non-Attainment
PM <sub>2.5</sub> (24-Hour)	Non-Attainment (Serious)	N/A
PM <sub>2.5</sub> (Annual)	Non-Attainment (Moderate)	Non-Attainment
Lead	Non-Attainment (Partial)	Attainment
Source: SCAQMD, Air Quality Managemen	nt Plan Appendix II website: http://www	.aqmd.gov/docs/default-

 Table 1

 Attainment Status for the South Coast Air Basin

Source: SCAQMD, Air Quality Management Plan Appendix II website: http://www.aqmd.gov/docs/defaultsource/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016aqmp/appendix-ii.pdf?sfvrsn=4, accessed: April 2019.

Because the South Coast Air Basin is currently in nonattainment for ozone, PM<sub>10</sub> and PM<sub>2.5</sub>, related projects may exceed an air quality standard or contribute to an existing or projected air quality exceedance. With respect to determining the significance of the Project contribution, the SCAQMD neither recommends quantified analyses of construction and/or operational emissions from multiple development projects nor provides methodologies or thresholds of significance to be used to assess the cumulative emissions generated by multiple cumulative projects. Instead, the SCAQMD recommends that a project's potential contribution to cumulative impacts be assessed utilizing the same significance criteria as those for project specific impacts. Furthermore, the SCAQMD states that if an individual development project generates less-than-significant construction or operational emissions impacts, then the development project would not contribute to a cumulatively considerable increase in emissions for those pollutants for which the Basin is in nonattainment.<sup>3</sup>

A project may have a significant impact if project-related emissions would exceed federal, state, or regional standards or thresholds, or if project-related emissions would substantially contribute to an

<sup>&</sup>lt;sup>3</sup> South Coast Air Quality Management District, White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution, Appendix A, August 2003.

existing or projected air quality violation. The Project Site is located in the South Coast Air Basin (Basin). The South Coast Air Quality Management District (SCAQMD) is the air pollution control agency for the Basin. To address potential impacts from construction and operational activities, the SCAQMD currently recommends that impacts from projects with mass daily emissions that exceed any of the thresholds outlined in Table 2, SCAQMD Thresholds of Significance, be considered significant. The City defers to these thresholds for the evaluation of construction and operational air quality impacts.

SCAQIND THESHOUS OF Significance						
Pollutant	Construction Thresholds (lbs/day)	Operational Thresholds (lbs/day)				
Volatile Organic Compounds (VOC)	75	55				
Nitrogen Oxides (NO <sub>x</sub> )	100	55				
Carbon Monoxide (CO)	550	550				
Sulfur Oxides (SO <sub>x</sub> )	150	150				
Particulate Matter (PM <sub>10</sub> )	150	150				
Fine Particulate Matter (PM <sub>2.5</sub> )	55	55				
Note: lbs = pounds. Source: SCAQMD CEQA Handbook (SCAQMD, 1993), SCAQMD Air Quality Significance Thresholds, website: http://aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance- thresholds.pdf?sfvrsn=2; accessed: April 2019.						

Table 2 SCAQMD Thresholds of Significance

#### **Regional Construction Emissions**

For purposes of analyzing impacts associated with air quality, this analysis assumes a construction schedule of approximately 20 months, which is a conservative estimate and yields the maximum daily impacts. Shoring, excavation and site preparation would occur for approximately 1 month with an export of approximately 12,908 cubic yards of soil. Building construction would occur for approximately 19 months. This phase would include the construction of the proposed structure, connection of utilities, laying irrigation for landscaping, architectural coatings, and landscaping the Project Site.

These construction activities would temporarily create emissions of dusts, fumes, equipment exhaust, and other air contaminants. Construction activities involving grading and site preparation would primarily generate PM<sub>2.5</sub> and PM<sub>10</sub> emissions. Mobile sources (such as diesel-fueled equipment onsite and traveling to and from the Project Site) would primarily generate NO<sub>x</sub> emissions. The application of architectural coatings would primarily result in the release of ROG emissions. The amount of emissions generated on a daily basis would vary, depending on the amount and types of construction activities occurring at the same time. The analysis of daily construction emissions has been prepared utilizing the California Emissions Estimator Model (CalEEMod 2016.3.2) recommended by the SCAQMD to quantify the estimated daily emissions associated with Project construction. The results are presented in Table 3, Estimated Peak Daily Construction Emissions, which identifies daily emissions that are estimated to occur on peak construction days for each construction phase.

Emissions Sourco	Emissions in Pounds per Day						
Emissions source	ROG	NOx	СО	SOx	PM10	PM2.5	
Shoring/Excavation/Site Preparation	Phase						
Fugitive Dust					2.09	1.12	
Off-Road Diesel Equipment	1.35	15.09	6.45	0.01	0.68	0.63	
On-Road Diesel (Hauling)	0.66	21.37	4.97	0.06	1.35	0.42	
Worker Trips	0.04	0.03	0.32	0.01	0.09	0.02	
Total Emissions	2.05	36.49	11.74	0.08	4.21	2.19	
SCAQMD Thresholds	75.00	100.00	550.00	150.00	150.00	55.00	
Significant Impact?	No	No	No	No	No	No	
Building Construction Phase							
Building Construction Off-Road	2 02	14 70	12 10	0.02	0.80	0.77	
Diesel Equipment	2.05	14.75	13.19	0.02	0.80	0.77	
Building Construction Vendor Trips	0.04	1.28	0.37	0.01	0.08	0.03	
Building Construction Worker Trips	0.30	0.21	2.37	0.01	0.67	0.18	
Architectural Coatings	11.09						
Architectural Coating Off-Road	0.22	1 5 2	1 0 2	0.01	0.00	0.00	
Diesel Equipment	0.22	1.55	1.02	0.01	0.09	0.09	
Architectural Coatings Worker Trips	0.06	0.04	0.44	0.01	0.14	0.04	
Total Emissions	13.74	17.85	18.19	0.06	1.78	1.11	
SCAQMD Thresholds	75.00	100.00	550.00	150.00	150.00	55.00	
Significant Impact?	No	No	No	No	No	No	
Note: Calculations assume compliance with SCAQMD Rule 403 – Fugitive Dust.							

Table 3 **Estimated Peak Daily Construction Emissions** 

Calculation sheets are provided in Appendix A to this report.

These calculations assume compliance with SCAQMD Rule 1113 – Architectural Coatings and appropriate dust control measures would be implemented as part of the Project during each phase of development as required by SCAQMD Rule 403 – Fugitive Dust. Specific Rule 403 control requirements include, but are not limited to, applying water in sufficient quantities to prevent the generation of visible dust plumes (at least two times per day), applying soil binders to uncovered areas, reestablishing ground cover as quickly as possible, utilizing a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the Project Site, and maintaining effective cover over exposed areas. As shown in Table 3, construction-related daily emissions associated with the Project would not exceed any regional SCAQMD significance thresholds for criteria pollutants during the construction phases. Therefore, regional construction impacts are considered to be less than significant. Localized air quality emissions are addressed under Question 3(d) below.

#### **Regional Operational Emissions**

The Project proposes the development of a 5-story mixed-use affordable housing building including 64 residential units, 4,265 square feet of ground floor commercial uses, and 56 parking spaces and one loading space in one level of subterranean parking. Operational emissions generated by area sources, motor vehicles and energy demand would result from normal day-to-day activities of the Project. The analysis of daily operational emissions associated with the Project has been prepared utilizing CalEEMod 2016.3.2 recommended by the SCAQMD. The results of these calculations are presented in Table 4, Estimated Daily Operational Emissions. As shown, the operational emissions generated by the Project would not exceed the regional thresholds of significance set by the SCAQMD. Therefore, impacts associated with regional operational emissions from the Project would be less than significant. Localized air quality emissions are addressed under Question 3(d) below.

Frainciana Course		Emissions in Pounds per Day							
Emissions Source	ROG	NOx	СО	SOx	<b>PM</b> <sub>10</sub>	PM2.5			
Summ	ertime (Smo	g Season) En	nissions						
Area Sources	1.98	1.05	5.88	<0.01	0.11	0.11			
Energy Demand	0.04	0.34	0.21	<0.01	0.03	0.03			
Mobile (Motor Vehicles)	0.85	3.82	10.26	0.03	2.70	0.74			
Total Project Emissions	2.87	5.21	16.35	0.04	2.83	0.88			
SCAQMD Thresholds	55.00	55.00	550.00	150.00	150.00	55.00			
Potentially Significant Impact?	No	No	No	No	No	No			
Wintert	ime (Non-Sm	og Season) I	Emissions						
Area Sources	1.98	1.05	5.88	<0.01	0.11	0.11			
Energy Demand	0.04	0.34	0.21	<0.01	0.03	0.03			
Mobile (Motor Vehicles)	0.82	3.90	9.86	0.03	2.70	0.74			
Total Project Emissions	2.85	5.28	15.95	0.04	2.83	0.88			
SCAQMD Thresholds	55.00	55.00	550.00	150.00	150.00	55.00			
Potentially Significant Impact?	No	No	No	No	No	No			
Note: Column totals may not add due to rounding from the model results.									

Table 4 **Estimated Daily Operational Emissions** 

Calculation sheets provided in Appendix A to this report.

As discussed above, the mass daily construction and operational emissions generated by the Project would not exceed any of the thresholds of significance recommended by the SCAQMD. In addition, as discussed under threshold question a), the Project would not exceed SCAG projections for the City population and is therefore consistent with the AQMP. Also, as discussed below, localized emissions generated by the Project would not exceed the SCAQMD's Localized Significance Thresholds (LSTs). Therefore, the Project would not contribute a cumulatively considerable increase in emissions for the pollutants which the Basin is in nonattainment. Thus, cumulative air quality impacts associated with the Project would be less than significant.

**c)** A significant impact may occur if a project were to generate pollutant concentrations to a degree that would significantly affect sensitive receptors. Land uses that are considered more sensitive to changes in air quality than others are referred to as sensitive receptors. Land uses such as primary and secondary schools, hospitals, and convalescent homes are considered to be sensitive to poor air quality because the very young, the old, and the infirm are more susceptible to respiratory infections and other air quality-related health problems than the general public. Residential uses are considered sensitive because people in residential areas are often at home for extended periods of time, so they could be exposed to pollutants for extended periods. Recreational areas are considered moderately sensitive to poor air quality because vigorous exercise associated with recreation places a high demand on the human respiratory function. The nearest air quality sensitive receptors to the Project Site are:

- adjacent residences to the south;
- residences to the west (20 feet);
- residences to the east (85 feet);
- residences to the north (150 feet); and
- school use to the southwest (480 feet).

#### Localized Emissions

Emissions from construction activities have the potential to generate localized emissions that may expose sensitive receptors to harmful pollutant concentrations. The SCAQMD has developed localized significance threshold (LST) look-up tables for project sites that are one, two, and five acres in size to simplify the evaluation of localized emissions at small sites. LSTs are provided for each Source Receptor Area (SRA) and various distances from the source of emissions.

In the case of this analysis, the Project Site is located within SRA 1 covering the Central Los Angeles area. The nearest sensitive receptors to the Project Site are residential uses within 25 meters. The closest receptor distance in the SCAQMD's mass rate look-up tables is 25 meters. Projects that are located closer than 25 meters to the nearest receptor are directed to use the LSTs for receptors located within 25 meters. As mentioned previously, the Project Site is 1.06 acres in size. Therefore, consistent with SCAQMD recommendations, the LSTs for a one-acre site in SRA 1 with receptors located within 25 meters have been used to address the potential localized NOx, CO, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions to the area surrounding the Project Site.

As shown in Table 5, Localized On-Site Peak Daily Construction Emissions, peak daily emissions generated within the Project Site during construction activities for each phase would not exceed the applicable construction LSTs for a one-acre site in SRA 1. Therefore, localized air quality impacts from Project construction activities on the off-site sensitive receptors would be less than significant.

Construction Dhase a	Total On-site Emissions (Pounds per Day)					
	NO <sub>x</sub> <sup>b</sup>	СО	PM10	PM2.5		
Shoring/ Site Preparation Emissions	15.09	6.45	2.77	1.75		
SCAQMD Localized Thresholds	74.00	680.00	5.00	3.00		
Potentially Significant Impact?	No	No	No	No		
Building Construction Emissions	16.32	15.01	0.89	0.86		
SCAQMD Localized Thresholds	74.00	680.00	5.00	3.00		
Potentially Significant Impact?	No	No	No	No		

 Table 5

 Localized On-Site Peak Daily Construction Emissions

Note: Calculations assume compliance with SCAQMD Rule 403 – Fugitive Dust. Building construction emissions include architectural coatings.

<sup>a</sup> The Project Site is 1.06 acres. Consistent with SCAQMD recommendations, the localized thresholds for all phases are based on a one-acre site with a receptor distance of 25 meters (82 feet) in SCAQMD's SRA 1.

<sup>b</sup> The localized thresholds listed for NO<sub>x</sub> in this table takes into consideration the gradual conversion of NO<sub>x</sub> to NO<sub>2</sub>, and are provided in the mass rate look-up tables in the "Final Localized Significance Threshold Methodology" document prepared by the SCAQMD. As discussed previously, the analysis of localized air quality impacts associated with NO<sub>x</sub> emissions is focused on NO<sub>2</sub> levels as they are associated with adverse health effects.

Calculation sheets are provided in Appendix A to this report.

With regard to localized emissions from motor vehicle travel, traffic congested roadways and intersections have the potential to generate localized high levels of carbon monoxide (CO). The SCAQMD suggests conducting a CO hotspots analysis for any intersection where a project would worsen the Level of Service (LOS) from A-C to any level below C, and for any intersection rated D or worse where the project would increase the V/C ratio by two percent or more. Based on the Project's Traffic Report,<sup>4</sup> the Project is not anticipated to have significant traffic impacts at any of the 5 study intersections. Thus, the Project would not have the potential to cause or contribute to an exceedance of the California one-hour or eight-hour CO standards of 20 or 9.0 ppm, respectively; or generate an incremental increase equal to or greater than 1.0 ppm for the California one-hour CO standard, or 0.45 ppm for the eight-hour CO standard at any local intersection. Therefore, impacts with respect to localized CO concentrations would be less than significant.

#### Toxic Air Contaminants (TAC)

As the Project consists of residential and commercial uses, the Project would not include any land uses that would involve the use, storage, or processing of carcinogenic or non-carcinogenic toxic air contaminants and no toxic airborne emissions would typically result from Project implementation. In addition, construction activities associated with the Project would be typical of other development projects in the City, and would be subject to the regulations and laws relating to toxic air pollutants at the regional, State, and federal level that would protect sensitive receptors from substantial concentrations

<sup>&</sup>lt;sup>4</sup> Linscott, Law & Greenspan, Engineers, Transportation Impact Study, Los Lirios Mixed-Use Project, City of Los Angeles, California, July 18, 2018.

of these emissions. In addition, construction activity would not result in long-term substantial sources of diesel particulate matter or other TAC emissions (i.e., 30 or 70 years) and would therefore not have the potential to generate significant health risks. Therefore, impacts associated with the release of toxic air contaminants would be less than significant.

**d)** A project-related significant adverse effect could occur if construction or operation of the proposed Project would result in generation of odors that would be perceptible in adjacent sensitive areas. According to the SCAQMD *CEQA Air Quality Handbook*, land uses and industrial operations that are associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies and fiberglass molding. The Project involves the construction and operation of residential and commercial uses, which are not typically associated with odor complaints. Potential sources that may emit odors during construction activities include equipment exhaust. Odors from these sources would be localized and generally confined to the immediate area surrounding the Project. The Project would use typical construction techniques, and the odors would be typical of most construction sites and temporary in nature. As mentioned previously, the Project would be consistent with SCAQMD Rule 1113 – Architectural Coatings. As the Project involves no operational elements related to industrial projects, no long-term operational objectionable odors are anticipated. Therefore, potential impacts associated with objectionable odors would be less than significant.

#### 4.0 NOISE ANALYSIS

Consistent with Appendix G of the State CEQA Guidelines, a significant impact may occur if a project would:

- Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- b) Generate excessive groundborne vibration or groundborne noise levels; or
- c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airstrip, expose people residing or working in the project area to excessive noise levels;

**a)** A significant impact may occur if the Project would generate excess noise that would cause the ambient noise environment at the Project Site to fail to comply with noise level standards set forth in the City of Los Angeles General Plan Noise Element (Noise Element) and the City of Los Angeles Noise Ordinance (Noise Ordinance) (Section 111.00 through Section 116.01 of the LAMC). Implementation of the Project would result in an increase in ambient noise levels during both construction and operations, as discussed in detail below.

#### **Construction Noise**

Construction-related noise impacts would be significant if, as indicated in LAMC Section 112.05, noise from construction equipment within 500 feet of a residential zone exceeds 75 dBA at a distance of 50 feet from the noise source. However, the above noise limitation does not apply where compliance is technically infeasible. Technically infeasible means that the above noise limitation cannot be complied with despite the use of mufflers, shields, sound barriers and/or any other noise reduction device or techniques during the operation of the equipment.

Construction of the Project would require the use of heavy equipment for grading foundation preparation, the installation of utilities, and building construction. During each construction phase there would be a different mix of equipment operating and noise levels would vary based on the amount of equipment in operation and the location of each activity.

The U.S. Environmental Protection Agency (EPA) has compiled data regarding the noise generating characteristics of specific types of construction equipment and typical construction activities. The data pertaining to the types of construction equipment and activities that would occur at the Project Site are presented in Table 6, Noise Range of Typical Construction Equipment, and Table 7, Estimated Project Construction Noise Levels, respectively, at a distance of 50 feet from the noise source (i.e., reference distance).

The noise levels shown in Table 7 represent composite noise levels associated with the construction activities that will be carried out by the Project, which take into account both the number of pieces and spacing of heavy construction equipment that are typically used during each phase of construction in a development such as the Project. As shown in Table 7, construction noise during the heavier initial periods of construction is presented as 86 dBA Leq when measured at a reference distance of 50 feet from the center of construction activity. These noise levels would diminish rapidly with distance from the construction site at a rate of approximately 6 dBA per doubling of distance. For example, a noise level of 84 dBA Leq measured at 50 feet from the noise source to the receptor would reduce to 78 dBA Leq at 100 feet from the source to the receptor, and reduce by another 6 dBA Leq to 72 dBA Leq at 200 feet from the source to the receptor.

Construction Equipment	Noise Level in dBA L <sub>eq</sub> at 50 Feet <sup>a</sup>
Front Loader	73-86
Trucks	82-95
Cranes (moveable)	75-88
Cranes (derrick)	86-89
Vibrator	68-82
Saws	72-82
Pneumatic Impact Equipment	83-88
Jackhammers	81-98
Pumps	68-72
Generators	71-83
Compressors	75-87
Concrete Mixers	75-88
Concrete Pumps	81-85
Back Hoe	73-95
Tractor	77-98
Scraper/Grader	80-93
Paver	85-88

 Table 6

 Noise Range of Typical Construction Equipment

<sup>a</sup> Machinery equipped with noise control devices or other noise-reducing design features does not generate the same level of noise emissions as that shown in this table.

Source: United States Environmental Protection Agency, Noise from Construction Equipment and Operations, Building Equipment and Home Appliances, PB 206717, 1971.

	Noise Levels at 50	Noise Levels at 60	Noise Levels at 100	Noise Levels at 200		
Construction	Feet with Mufflers	Feet with Mufflers	Feet with Mufflers	Feet with Mufflers		
Phase	(dBA L <sub>eq</sub> )					
Ground Clearing	82	80	76	70		
Excavation,	96	94	80	74		
Grading	80	04	00	74		
Foundations	77	75	71	65		
Structural	83	81	77	71		
Finishing	86	84	80	74		
Source: United States Environmental Protection Agency, Noise from Construction Equipment and Operations, Building Equipment and Home Appliances, PB 206717, 1971.						

 Table 7

 Estimated Project Construction Noise Levels

To identify the existing ambient noise levels in the general vicinity of the Project Site, noise measurements were taken with a 3M SoundPro SP DL-1 sound level meter, which conforms to industry standards set forth in ANSI S1.4-1983 (R2006) – Specification for Sound Level Meters/Type 1.<sup>5</sup> The measured noise levels are shown in Table 8, Existing Ambient Daytime Noise Levels. See Figure 1, previously, for the locations of the noise measurements and nearest sensitive receptors. The nearest noise sensitive receptors to the Project Site are:

- adjacent residences to the south;
- residences to the west (20 feet);
- residences to the east (85 feet);
- historic use to the east (87 feet);
- residences to the north (150 feet);
- church use to the east (300 feet);
- church use to the southwest (330 feet);
- < library to the west (445 feet);and
- school use to the southwest (480 feet).

<sup>&</sup>lt;sup>5</sup> This noise meter meets the requirement specified in LAMC Section 111.01(I) that the instruments be "Type S2A" standard instruments or better. This instrument was calibrated and operated according to the manufacturer's written specifications. At the measurement sites, the microphone was placed at a height of approximately five feet above grade.

			Noise Level		elsa	
No.	Location	Primary Noise Sources	Leq	Lmax	Lmin	
1	East frontage of the Project Site along S. Soto Street, near residential receptors.	Traffic, pedestrian, and residential activity along S. Soto Street.	68.8	81.4	53.7	
2	North of the Project Site along E. 1 <sup>st</sup> Street.	Traffic and pedestrian activity along E 1 <sup>st</sup> Street.	66.7	75.8	57.2	
2	Southwest from the Project Site along S. Breed Street, near church and school sensitive receptors.	Traffic, pedestrian, residential, and school activity along Breed Street.	61.0	79.1	49.2	
<sup>a</sup> Noise measurements were taken on April 3, 2019 at each location for a duration of 15 minutes. See Appendix B to this report for noise data. Source: Pomeroy Environmental Services, 2019.						

Table 8Existing Ambient Daytime Noise Levels

Due to the use of construction equipment during the construction phase, the Project would expose surrounding off-site receptors to increased ambient exterior noise levels comparable to those previously listed above in Table 7. Specifically, based on the data provided in Table 7, construction noise levels at the residences within 50 feet could reach 86 dBA compared to the existing measured noise levels of 68.8, 66.7, dBA and 61.0 dBA for the area. It should be noted, however, that any increase in noise levels at off-site receptors during construction of the Project would be temporary in nature, and would not generate continuously high noise levels, although occasional single-event disturbances from construction are possible. In addition, the construction noise during the heavier initial periods of construction (i.e., foundation work) would typically be reduced in the later construction phases (i.e., interior building construction at the proposed building) as the physical structure of the proposed structure would break the line-of-sight noise transmission from the construction area to the nearby sensitive receptors.

Similar to other development projects in the City, the Project would comply with the City's existing noise regulations to ensure noise impacts would be less than significant. LAMC Section 41.40 regulates noise from construction activities. Exterior construction activities that generate noise are prohibited between the hours of 9:00 P.M. and 7:00 A.M. Monday through Friday, and between 6:00 P.M. and 8:00 A.M. on Saturday.<sup>6</sup> The construction activities associated with the Project would comply with these LAMC requirements. In addition, pursuant to LAMC Section 112.05, compliance with construction noise standards is achieved if all technically feasible noise reduction measures are implemented. According to the LAMC, technically infeasible means that the above noise limitation cannot be complied with despite the use of mufflers, shields, sound barriers and/or any other noise reduction device or techniques during the operation of the equipment.<sup>7</sup> Although the estimated construction-related noise levels associated with the Project could periodically exceed the numerical noise threshold of 75 dBA at 50 feet from the noise source as outlined in LAMC Section 112.05, the Project would implement all technically feasible

<sup>&</sup>lt;sup>6</sup> Los Angeles Municipal Code, Section 41.40.

<sup>&</sup>lt;sup>7</sup> Los Angeles Municipal Code, Section 112.05.

reduction measures in compliance with the standards set forth in LAMC Section 112.05 (see RCM-1 through RCM-7 below).

Specifically, the use of barriers such as plywood structures, flexible sound control curtains, or intervening construction trailers, could reduce line-of-sight noise levels by approximately 10 dbA.<sup>8</sup> And, with the incorporation of the LAMC-required noise reduction techniques, construction noise levels could be reduced by up to approximately 20 dBA.<sup>9</sup> As previously stated, construction noise levels could reach up to approximately 86 dBA Leq. However, with the reduction of approximately 20 dBA per code-required noise reduction techniques (see RCM-1 through RCM-7, and footnotes 7 and 8 below), the resulting construction noise levels would be reduced to approximately 66 dBA Leq. These noise levels would not exceed the noise threshold of 75 dBA at 50 feet from the noise source as outlined in LAMC Section 112.05. With the code-required reduced construction noise of 66 dBA, the construction noise levels would be substantially similar (and potentially less than), the existing ambient noise in the heavily urbanized location.

Thus, based on the provisions set forth in LAMC 112.05, implementation of the following regulatory compliance measures would ensure the Project be consistent with, and not violate the provisions of, the LAMC. Thus, the Project would comply with the City's existing noise regulations to ensure construction noise impacts would be less than significant. The noise reduction techniques required by LAMC 41.40 and 112.05 would include the following:

**RCM-1:** The Project shall comply with the City of Los Angeles Noise Ordinance No. 144,331 and 161,574 (see LAMC Section 112.05), and any subsequent ordinances, which prohibit the emission or creation of noise beyond certain levels.

**RCM-2:** Construction shall be restricted to the hours of 7:00 A.M. to 9:00 P.M. Monday through Friday, and 8:00 A.M. to 6:00 P.M. on Saturday.

**RCM-3:** Construction activities shall be scheduled so as to avoid operating several pieces of equipment simultaneously, which causes high noise levels.

<sup>&</sup>lt;sup>8</sup> Based on a review of Table 4 of the FHWA Noise Barrier Design Handbook (July 14, 2011), the design feasibility of a sound barrier that reduces noise by 5 dBA is considered "simple" and a reduction of up to 10 dBA as "attainable." And, reductions of 15 and 20 dBA are considered "very difficult" and "nearly impossible," respectively.

<sup>&</sup>lt;sup>9</sup> Estimate based on information from the United States Environmental Protection Agency, Noise from Construction Equipment and Operations, Building Equipment and Home Appliances, PB 206717, 1971. Per Table V, Noise Control For Construction Equipment therein, use of improved mufflers/silencers would achieve approximately 10 dBA reduction and enclosures/barriers blocking line-of-sight would achieve approximately 10 dBA reduction. While the additional measures would reduce noise, it should be noted that all reductions would not be wholly additive, but would be incremental, and therefore have conservatively not been quantified in the estimated reduction.

**RCM-4:** Noise-generating equipment operated at the Project Site shall be equipped with the most effective and technologically feasible noise control devices, such as mufflers, lagging (enclosures for exhaust pipes), and/or motor enclosures. All equipment shall be properly maintained to assure that no additional noise, due to worn or improperly maintained parts, would be generated.

**RCM-5:** Noise and groundborne vibration construction activities whose specific location on the site may be flexible (e.g., operation of compressors and generators, cement mixing, general truck idling) shall be conducted as far as possible from the nearest noise- and vibration-sensitive land uses, and natural and/or manmade barriers (e.g., intervening construction trailers) shall be used to screen propagation of noise from such activities towards these land uses to the maximum extent possible.

**RCM-6:** Barriers such as, but not limited to, plywood structures or flexible sound control curtains shall be erected around the perimeter of the construction site, and around stationary equipment as feasible (i.e., generators, air compressors, etc.), to minimize the amount of noise during construction on the nearby noise-sensitive uses. Perimeter barriers shall be at least 8 feet in height and constructed of materials achieving a Transmission Loss (TL) value of at least 20 dBA, such as ½ inch plywood.<sup>10</sup>

**RCM-7:** The Project shall comply with the City of Los Angeles Building Regulations Ordinance No. 178,048 (see LAMC Section 91.106.4.8), which requires a construction site notice to be provided that includes the following information: job site address, permit number, name and phone number of the contractor and owner or owner's agent, hours of construction allowed by code or any discretionary approval for the site, and City telephone numbers where violations can be reported. The notice shall be posted and maintained at the construction site prior to the start of construction and displayed in a location that is readily visible to the public.

#### **Operational Noise**

A significant impact may occur if the Project were to result in a substantial permanent increase in ambient noise levels above existing ambient noise levels without the Project. A project would normally have a significant impact on noise levels from project operations if the project causes the ambient noise level measured at the property line of affected uses that are shown in Table 9, Community Noise Exposure (CNEL), to increase by 3 dBA in CNEL to or within the "normally unacceptable" or "clearly unacceptable" category, or any 5 dBA or greater noise increase.

As such, a significant impact would occur if noise levels associated with operation of the Project would increase the ambient noise levels by 3 dBA CNEL at homes where the resulting noise level would be at

<sup>&</sup>lt;sup>10</sup> Based on the FHWA Noise Barrier Design Handbook (July 14, 2011), see Table 3, Approximate sound transmission loss values for common materials.

least 70 dBA CNEL. In addition, any long-term increase of 5 dBA CNEL or more is considered to cause a significant impact. Generally, in order to achieve a 3 dBA CNEL increase in ambient noise from traffic, the volume on any given roadway would need to double. In addition to analyzing potential impacts in terms of CNEL, the analysis also addresses increases in on-site noise sources per the provisions of the LAMC, which establishes a Leq standard of 5 dBA over ambient conditions as constituting a LAMC violation.

	Normally	Conditionally	Normally	Clearly
Land Use	Acceptable <sup>a</sup>	Acceptable <sup>b</sup>	<b>Unacceptable</b> <sup>c</sup>	Unacceptable <sup>d</sup>
Single-family, Duplex, Mobile Homes	50 - 60	55 - 70	70 - 75	above 75
Multi-Family Homes	50 - 65	60 - 70	70 - 75	above 75
Schools, Libraries, Churches, Hospitals, Nursing Homes	50 - 70	60 - 70	70 - 80	above 80
Transient Lodging – Motels, Hotels	50 - 65	60 - 70	70 - 80	above 75
Auditoriums, Concert Halls, Amphitheaters		50 - 70		above 70
Sports Arena, Outdoor Spectator Sports		50 - 75		above 75
Playgrounds, Neighborhood Parks	50 - 70		67 - 75	above 75
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50 - 75		70 - 80	above 80
Office Buildings, Business and Professional Commercial	50 - 70	67 - 77	above 75	
Industrial, Manufacturing, Utilities, Agriculture	50 - 75	70 - 80	above 75	

Table 9Community Noise Exposure

<sup>a</sup> Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.

<sup>b</sup> Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

<sup>c</sup> Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

<sup>d</sup> Clearly Unacceptable: New construction or development should generally not be undertaken.

Source: Office of Planning and Research, State of California Genera Plan Guidelines, October 2003 (in coordination with the California Department of Health Services); City of Los Angeles, General Plan Noise Element, adopted February 1999.

#### Traffic Noise

In order for a new noise source to be audible, there would need to be a 3 dBA or greater CNEL noise increase. As discussed above, the traffic volume on any given roadway would need to double in order for a 3 dBA increase in ambient noise to occur. According to the L.A. CEQA Thresholds Guide, if a project

would result in traffic that is less than double the existing traffic, then the project's mobile noise impacts are assumed to be less than significant. As detailed in the Traffic Report,<sup>11</sup> the Project is estimated to add 496 daily trips, including 48 morning peak hour trips and 41 afternoon peak hour trips to a highly developed area of the City that is already impacted by heavy traffic noise. Moreover, the highest Projectrelated trip increase would occur at intersection number 3 (S. Soto Street and E. 1<sup>st</sup> Street) during the AM peak hour with 36 peak hour trips. When compared to the existing 2,837 vehicle trips occurring at intersection number 3 during the AM peak hour, it is clear that the Project would not double the traffic volumes on any roadway segment in the vicinity of the Project Site. As such, the Project would not increase roadway noise levels by 3 dBA and, thus, traffic noise impacts would be less than significant.

#### **Stationary Noise Sources**

New stationary sources of noise, such as mechanical HVAC equipment would be installed. The design of this equipment would comply with LAMC Section 112.02, which prohibits noise from air conditioning, refrigeration, heating, pumping, and filtering equipment from exceeding the ambient noise level on the premises of other occupied properties by more than five decibels. Thus, because the noise levels generated by the HVAC equipment serving the Project would not be allowed to exceed the ambient noise level by five decibels on the premises of the adjacent properties, a substantial permanent increase in noise levels would not occur at the nearby sensitive receptors. This impact would be less than significant.

#### Parking Noise

Noise would be generated by activities within the proposed subterranean parking garage. Sources of noise would include engines accelerating, doors slamming, car alarms, and people talking. Noise levels within the parking area would fluctuate with the amount of automobile and human activity. It is anticipated that parking related noise would be less than the existing street parking noise as the Project proposes enclosed parking which would reduce noise impacts to off-site uses. In addition, parking-related noise generated by motor driven vehicles within and around the Project Site is regulated under the LAMC. Specifically, with regard to motor-driven vehicles, LAMC Section 114.02 prohibits the operation of any motor-driven vehicles upon any property within the City such that the created noise would cause the noise level on the premises of any occupied residential property to exceed the ambient noise level by more than five decibels. As such, noise impacts associated with the Project's parking area would be less than significant.

In addition, on-site residences would not be adversely impacted by elevated ambient urban noise levels because the Project would be constructed to meet and exceed Title 24 insulation standards of the California Code of Regulations for residential buildings, which serves to provide an acceptable interior noise environment for sensitive uses. Specifically, as required by Title 24, the Project would be designed

<sup>&</sup>lt;sup>11</sup> Linscott, Law & Greenspan, Engineers, Transportation Impact Study, Los Lirios Mixed-Use Project, City of Los Angeles, California, July 18, 2018.

and constructed to ensure interior noise levels would be at or below a CNEL of 45 dBA in any habitable room of the project. Given the existing measured noise levels are 68.8, 66.7, dBA and 61.0 dBA for the vicinity, and the approximate 30 dBA exterior-to-interior noise reduction for new residential construction,<sup>12</sup> it is clear that standard construction methods and materials would achieve interior noise levels at or below 45 dBA. As such, impacts associated with interior noise levels at the proposed residences would be less than significant.

**b)** A significant impact may occur if a project were to generate excessive vibration during construction or operation. Vibration is sound radiated through the ground. Vibration can result from a source (e.g., subway operations, vehicles, machinery equipment, etc.) causing the adjacent ground to move, thereby creating vibration waves that propagate through the soil to the foundations of nearby buildings. This effect is referred to as groundborne vibration. The peak particle velocity (PPV) or the root mean square (RMS) velocity is usually used to describe vibration levels. PPV is defined as the maximum instantaneous peak of the vibration level, while RMS is defined as the square root of the average of the squared amplitude of the level. PPV is typically used for evaluating potential building damage, while RMS velocity in decibels (VdB) is typically more suitable for evaluating human response.

The background vibration velocity level in residential areas is usually around 50 VdB. The vibration velocity level threshold of perception for humans is approximately 65 VdB. A vibration velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels for most people. Most perceptible indoor vibration is caused by sources within buildings such as operation of mechanical equipment, movement of people, or the slamming of doors. Typical outdoor sources of perceptible groundborne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the groundborne vibration from traffic is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings.

#### **Construction Vibration**

Construction activities for the Project have the potential to generate low levels of groundborne vibration. The operation of construction equipment generates vibrations that propagate through the ground and diminishes in intensity with distance from the source. Vibration impacts can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, to slight damage of buildings at the highest levels. The construction activities associated with the Project could have an adverse impact on both sensitive structures (i.e., building damage) and populations (i.e., annoyance).

<sup>&</sup>lt;sup>12</sup> Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings requires substantial building insulation and windows which reduces exterior to interior noise transmission.

In terms of construction-related impacts on buildings, the City of Los Angeles has not adopted policies or guidelines relative to groundborne vibration. While the Los Angeles County Code (LACC Section 12.08.350) states a presumed perception threshold of 0.01 inch per second RMS, this threshold applies to groundborne vibrations from long-term operational activities, not construction. Consequently, as both the City of Los Angeles and the County of Los Angeles do not have a significance threshold to assess vibration impacts during construction, the Federal Transit Administration (FTA) and California Department of Transportation's (Caltrans) adopted vibration standards for buildings which are used to evaluate potential impacts related to construction. Based on the FTA and Caltrans criteria, construction impacts relative to groundborne vibration would be considered significant if the following were to occur:<sup>13</sup>

- Project construction activities would cause a PPV groundborne vibration level to exceed 0.5 inches per second at any building that is constructed with reinforced-concrete, steel, or timber;
- Project construction activities would cause a PPV groundborne vibration level to exceed 0.3 inches per second at any engineered concrete and masonry buildings;
- Project construction activities would cause a PPV groundborne vibration level to exceed 0.2 inches per second at any non-engineered timber and masonry buildings; or
- Project construction activities would cause a PPV ground-borne vibration level to exceed 0.12 inches per second at any historical building or building that is extremely susceptible to vibration damage.

In addition, the City of Los Angeles has not adopted any thresholds associated with human annoyance for groundborne vibration impacts. Therefore, this analysis uses the FTA's vibration impact thresholds for human annoyance. These thresholds include 80 VdB at residences and buildings where people normally sleep (e.g., nearby residences) and 83 VdB at institutional buildings, which includes schools and churches. No thresholds have been adopted or recommended for commercial and office uses. Table 10, Vibration Source Levels for Construction Equipment, identifies various PPV and RMS velocity (in VdB) levels for the types of construction equipment that would operate at the Project Site during construction.

<sup>&</sup>lt;sup>13</sup> Federal Transit Administration, Transit Noise and Vibration Impact Assessment, May 2006; and California Department of Transportation, Transportation- and Construction –Induced Vibration Guidance Manual, June 2004.

						•	•			
		Approximate PPV (in/sec)				Approximate RMS (VdB)				
	25	50	60	75	100	25	50	60	75	100
Equipment	Feet	Feet	Feet	Feet	Feet	Feet	Feet	Feet	Feet	Feet
Large Bulldozer	0.089	0.031	0.024	0.017	0.011	87	78	76	73	69
Caisson Drilling	0.089	0.031	0.024	0.017	0.011	87	78	76	73	69
Loaded Trucks	0.076	0.027	0.020	0.015	0.010	86	77	75	72	68
Jackhammer	0.035	0.012	0.009	0.007	0.004	79	70	68	65	61
Small Bulldozer	0.003	0.001	0.0008	0.0006	0.0004	58	49	47	44	40
Note: in/sec = inches per second Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, Final Report, 2006.										

Table 10 Vibration Source Levels for Construction Equipment

With respect to construction vibration impacts upon existing off-site structures, a historic Victorian house (i.e., Peabody Werden Duplex) (Receptor 4) is located 87 feet across from the Project Site along S. Soto Street. According to the FTA, ground vibration from construction activities do not often reach the levels that can damage structures.<sup>14</sup> Per the FTA, there are four general building categories: I. Reinforced-concrete, steel or timber (no plaster), II. Engineered concrete and masonry (no plaster), III. Non-engineered timber and masonry buildings, and IV. Buildings extremely susceptible to vibration damage. This analysis conservatively considers Receptor 4 a Category IV building (buildings extremely susceptible to vibration damage). The FTA identifies a 0.12 PPV (in/sec) construction vibration criteria for Category IV. Based on the reference data provided in Table 10, worst-case construction vibration levels would be less than 0.015 PPV (in/sec) for receptors located farther than 70 feet from the source. As Receptor 4 is located approximately 87 feet from the Project Site, the construction vibration would not have the potential to exceed the FTA's 0.12 PPV (in/sec) standard for Category IV buildings.

In addition, there are residential uses immediately adjacent to the Project Site. Conservatively, this analysis assumes the adjacent uses best fit under Category III, Non-engineered timber and masonry building. The FTA identifies a 0.20 PPV (in/sec) construction vibration criteria for Category III. Based on the reference data provided in Table 10, worst-case construction vibration levels at adjacent locations could have the potential to exceed the FTA's 0.20 PPV (inches per second) construction vibration criteria for Category III. (Non-engineered timber and masonry building). The Project would comply with the City's existing construction vibration regulations. The Project would implement RCM-8 (below), which would ensure all construction work would be performed in accordance with Section 91.3307.1 (Protection Required) of the LAMC. Specifically, Section 91.3307.1 (Protection Required) states adjoining public and private property shall be protected from damage during construction, remodeling and demolition work.<sup>15</sup>

<sup>&</sup>lt;sup>14</sup> FTA, Transit Noise and Vibration Impact Assessment, Final Report, 2006, see page 12-10.

<sup>&</sup>lt;sup>15</sup> Los Angeles Municipal Code, Section 91.3307.1.

Protection must be provided for footings, foundations, party (i.e., shared) walls, chimneys, skylights, and roofs. Provisions shall be made to control water runoff and erosion during construction activities. For excavations, adjacent property shall be protected as set forth in Section 832 of the Civil Code of California. Prior to the issuance of any permit, which authorizes an excavation where the excavation is to be of a greater depth than are the walls or foundation of any adjoining building or structure and located closer to the property line than the depth of the excavation, the owner of the site shall provide the Department of Building and Safety with evidence that the adjacent property owner or owners have been given a 30-day written notice of the intent to excavate. This notice shall state the depth to which the excavation is intended to be made and when the excavation will commence. This notice shall be by certified mail, return receipt requested.

The Project would implement RCM-8 (incorporating a structure monitoring program), ensuring the Project would comply with all regulatory requirements (i.e., Section 91.3307.1 of the LAMC and Section 832 of the Civil Code of California).

**RCM-8:** All construction work shall be performed in accordance with Section 91.3307.1 (Protection Required) of the LAMC and Section 832 of the Civil Code of California. Compliance with these standards will ensure all adjacent property shall be protected from damage during construction. The Project Applicant shall complete a structural monitoring program for the adjacent uses during construction including the following steps and procedures:

- Prior to start of construction, the Applicant shall retain the services of a structural engineer to visit the adjacent uses to inspect and document the apparent physical condition of the buildings, including but not limited to the building structure, interior walls, and ceiling finishes. In addition, the structural engineer shall establish baseline structural conditions of the buildings and prepare a shoring design.
- C The Applicant shall retain the services of a qualified acoustical engineer to review proposed construction equipment and develop and implement a vibration monitoring program capable of documenting the construction-related ground vibration levels at the building during construction. The vibration monitoring system shall measure and continuously store the peak particle velocity (PPV) in inch/second. Vibration data shall be stored on a one-second interval. The system shall also be programmed for two preset velocity levels: a warning level of 0.17 inch/second (PPV), and a regulatory level of 0.20 inch/second (PPV). The system shall also provide real-time alert when the vibration levels exceed the two preset levels.
- In the event the warning levels above are triggered, the contractor shall identify the source of vibration generation and provide feasible steps to reduce the vibration level, including but not limited to halting/staggering concurrent activities and utilizing lower vibratory techniques.
- In the event the regulatory levels above are triggered, the contractor shall halt the construction activities in the vicinity of the building and visually inspect the building for any damage. Results of the inspection must be logged. The contractor shall identify the source

of vibration generation and provide feasible steps to reduce the vibration level. Construction activities may then restart.

In the event damage occurs to an adjacent use due to construction vibration, such materials shall be repaired and restored to previous condition as feasible.

With respect to human annoyance resulting from vibration generated during construction, the sensitive receptors located in the vicinity of the Project Site could be exposed to increased vibration levels. Based on the data provided in Table 10, the adjacent residences could experience vibration levels of 87 VdB. As such, the 80 VdB residential annoyance threshold could be exceeded at these off-site locations during worst-case construction activity. However, it should be noted that vibration levels experienced in the Project vicinity would be temporary and intermittent, and would be reduced when the construction activities are located toward the center of the Project Site. As stated previously, the Project would comply with the City's existing construction LAMC regulations, which would protect adjacent uses from damage. Furthermore, consistent with the requirements of LAMC Section 112.05, construction activities would be compliant with the LAMC standards if all technically feasible noise reduction measures are implemented. The construction noise RCMs listed previously would also serve to reduce construction vibration levels to the maximum extent feasible. As such, human annoyance impacts with respect to construction vibration would be less than significant.

#### **Operational Vibration**

The Project involves the construction and operation of residential and commercial uses and would not involve the use of stationary equipment that would result in high vibration levels, which are more typical for large manufacturing and industrial projects. Groundborne vibrations at the Project Site and immediate vicinity currently result from heavy-duty vehicular travel (e.g., refuse trucks and transit buses) on the nearby local roadways, and the proposed land uses at the Project Site would not result in a substantive increase of these heavy-duty vehicles on the public roadways. While refuse trucks would be used for the removal of solid waste at the Project Site, these trips would typically only occur once a week and would not be any different than those presently occurring on-site and in the vicinity of the Project Site. As such, vibration impacts associated with operation of the Project would be less than significant.

**c)** The Project Site is not located in the vicinity of a private airstrip. The Hawthorne Municipal Airport is the closest airport to the Project Site, located approximately 10.2 miles to the south. In addition, the Project Site is not located within an airport land use plan. As such, the Project would not expose people to excessive aircraft noise levels. Therefore, no impact would occur.

## 5.0 CONCLUSION

As outlined in the preceding sections herein, the Project would not have the potential to result in any significant effects relating to air quality emissions and noise and vibration. The implementation of RCMs 1-8 would ensure the Project's consistency with all LAMC regulatory requirements.

Appendix A

Air Quality Data

119 S. Soto Avenue Project - Los Angeles-South Coast County, Winter

# 119 S. Soto Avenue Project

Los Angeles-South Coast County, Winter

# **1.0 Project Characteristics**

## 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	66.00	Dwelling Unit	0.43	73,789.00	189
Regional Shopping Center	2.50	1000sqft	0.06	2,500.00	0
High Turnover (Sit Down Restaurant)	2.50	1000sqft	0.06	2,500.00	0
Enclosed Parking with Elevator	57.00	Space	0.51	22,800.00	0

## **1.2 Other Project Characteristics**

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33			
Climate Zone	12			Operational Year	2021			
Utility Company	Los Angeles Department of Water & Power							
CO2 Intensity (Ib/MWhr)	1227.89	CH4 Intensity (Ib/MWhr)	0.029	N2O Intensity 0 (Ib/MWhr)	0.006			

## 1.3 User Entered Comments & Non-Default Data

CalEEMod Version: CalEEMod.2016.3.2

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119 S. Soto Avenue Project - Los Angeles-South Coast County, Winter

Project Characteristics -

Land Use - Project Site is 1.06 ac.

Construction Phase - Estimated construction schedule.

Grading - Project Site is 1.06 ac.

Architectural Coating - Consistent with SCAQMD Rule 1113 assumed VOC content of 50 grams per liter for architectural coatings.

Vehicle Trips - Per traffic study.

Area Coating - Consistent with SCAQMD Rule 1113 assumed VOC content of 50 grams per liter for architectural coatings.

Construction Off-road Equipment Mitigation -

Area Mitigation -

**Energy Mitigation -**

Water Mitigation - Project compliance with the LA Green Building Code results in a 20% reduction in both indoor and outdoor water use.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstructionPhase	NumDays	10.00	44.00
tblConstructionPhase	NumDays	200.00	418.00
tblConstructionPhase	NumDays	4.00	22.00
tblConstructionPhase	PhaseEndDate	12/9/2020	9/7/2021
tblConstructionPhase	PhaseEndDate	11/11/2020	9/7/2021
tblConstructionPhase	PhaseEndDate	2/5/2020	1/30/2020
tblConstructionPhase	PhaseStartDate	11/26/2020	7/8/2021
tblConstructionPhase	PhaseStartDate	2/6/2020	1/31/2020

tblConstructionPhase	PhaseStartDate	1/31/2020	1/1/2020
tblGrading	AcresOfGrading	8.25	1.06
tblGrading	MaterialExported	0.00	12,908.00
tblLandUse	LandUseSquareFeet	66,000.00	73,789.00
tblLandUse	LotAcreage	1.74	0.43
tblVehicleTrips	ST_TR	6.39	4.03
tblVehicleTrips	ST_TR	158.37	76.00
tblVehicleTrips	ST_TR	49.97	16.00
tblVehicleTrips	SU_TR	5.86	4.03
tblVehicleTrips	SU_TR	131.84	76.00
tblVehicleTrips	SU_TR	25.24	16.00
tblVehicleTrips	WD_TR	6.65	4.03
tblVehicleTrips	WD_TR	127.15	76.00
tblVehicleTrips	WD_TR	42.70	16.00

## 119 S. Soto Avenue Project - Los Angeles-South Coast County, Winter

2.0 Emissions Summary

# 119 S. Soto Avenue Project - Los Angeles-South Coast County, Winter

## 2.1 Overall Construction (Maximum Daily Emission)

**Unmitigated Construction** 

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year					lb/o	day							lb/d	day		
2020	2.3766	36.4824	15.9229	0.0719	6.0062	0.8076	6.7597	2.8736	0.7798	3.5693	0.0000	7,624.883 9	7,624.883 9	0.8874	0.0000	7,647.068 9
2021	13.5006	16.5571	17.6685	0.0357	0.8704	0.7873	1.6578	0.2326	0.7632	0.9958	0.0000	3,364.781 0	3,364.781 0	0.4197	0.0000	3,375.273 3
Maximum	13.5006	36.4824	17.6685	0.0719	6.0062	0.8076	6.7597	2.8736	0.7798	3.5693	0.0000	7,624.883 9	7,624.883 9	0.8874	0.0000	7,647.068 9

## **Mitigated Construction**

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year					lb/	′day							lb/	′day		
2020	2.3766	36.4824	15.9229	0.0719	3.4575	0.8076	4.2110	1.4995	0.7798	2.1953	0.0000	7,624.883 9	7,624.883 9	0.8874	0.0000	7,647.068 9
2021	13.5006	16.5571	17.6685	0.0357	0.8704	0.7873	1.6578	0.2326	0.7632	0.9958	0.0000	3,364.781 0	3,364.781 0	0.4197	0.0000	3,375.273 3
Maximum	13.5006	36.4824	17.6685	0.0719	3.4575	0.8076	4.2110	1.4995	0.7798	2.1953	0.0000	7,624.883 9	7,624.883 9	0.8874	0.0000	7,647.068 9
	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	37.06	0.00	30.28	44.24	0.00	30.10	0.00	0.00	0.00	0.00	0.00	0.00

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119 S. Soto Avenue Project - Los Angeles-South Coast County, Winter

# 2.2 Overall Operational

#### Unmitigated Operational

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/o	day							lb/c	lay		
Area	19.1621	1.4324	39.0277	0.0859		5.0717	5.0717		5.0717	5.0717	618.2166	1,197.818 0	1,816.034 6	1.8532	0.0420	1,874.868 2
Energy	0.0386	0.3390	0.2089	2.1000e- 003		0.0267	0.0267		0.0267	0.0267		420.8090	420.8090	8.0700e- 003	7.7100e- 003	423.3096
Mobile	0.8237	3.8966	9.8569	0.0326	2.6673	0.0287	2.6960	0.7138	0.0268	0.7407		3,319.646 0	3,319.646 0	0.1872		3,324.324 8
Total	20.0244	5.6681	49.0935	0.1206	2.6673	5.1271	7.7944	0.7138	5.1252	5.8390	618.2166	4,938.273 0	5,556.489 6	2.0484	0.0497	5,622.502 7

#### Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/	day							lb/d	day		
Area	1.9831	1.0484	5.8826	6.5800e- 003		0.1098	0.1098		0.1098	0.1098	0.0000	1,267.700 4	1,267.700 4	0.0337	0.0231	1,275.413 8
Energy	0.0386	0.3390	0.2089	2.1000e- 003		0.0267	0.0267		0.0267	0.0267		420.8090	420.8090	8.0700e- 003	7.7100e- 003	423.3096
Mobile	0.8237	3.8966	9.8569	0.0326	2.6673	0.0287	2.6960	0.7138	0.0268	0.7407		3,319.646 0	3,319.646 0	0.1872		3,324.324 8
Total	2.8453	5.2840	15.9484	0.0413	2.6673	0.1652	2.8324	0.7138	0.1633	0.8771	0.0000	5,008.155 4	5,008.155 4	0.2289	0.0308	5,023.048 2

#### 119 S. Soto Avenue Project - Los Angeles-South Coast County, Winter

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	85.79	6.78	67.51	65.76	0.00	96.78	63.66	0.00	96.81	84.98	100.00	-1.42	9.87	88.83	38.05	10.66

## **3.0 Construction Detail**

#### **Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2020	1/30/2020	5	22	
2	Building Construction	Building Construction	1/31/2020	9/7/2021	5	418	
3	Architectural Coating	Architectural Coating	7/8/2021	9/7/2021	5	44	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 1.06

Acres of Paving: 0.51

Residential Indoor: 149,423; Residential Outdoor: 49,808; Non-Residential Indoor: 7,500; Non-Residential Outdoor: 2,500; Striped Parking Area: 1,368 (Architectural Coating – sqft)

OffRoad Equipment

119 S. Soto	Avenue Project -	Los Angeles-South	Coast County, Winter
			<b>, ,</b> , ,

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Building Construction	Welders	3	8.00	46	0.45

## Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	3	8.00	0.00	1,614.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	59.00	12.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	12.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

# **3.1 Mitigation Measures Construction**

Water Exposed Area

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119 S. Soto Avenue Project - Los Angeles-South Coast County, Winter

# 3.2 Grading - 2020

# Unmitigated Construction On-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/d	day							lb/c	lay		
Fugitive Dust					4.6340	0.0000	4.6340	2.4982	0.0000	2.4982			0.0000			0.0000
Off-Road	1.3498	15.0854	6.4543	0.0141		0.6844	0.6844		0.6296	0.6296		1,365.718 3	1,365.718 3	0.4417		1,376.760 9
Total	1.3498	15.0854	6.4543	0.0141	4.6340	0.6844	5.3184	2.4982	0.6296	3.1279		1,365.718 3	1,365.718 3	0.4417		1,376.760 9

## Unmitigated Construction Off-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/d	day							lb/c	day		
Hauling	0.6564	21.3681	4.9678	0.0570	1.2827	0.0684	1.3511	0.3516	0.0654	0.4170		6,170.571 9	6,170.571 9	0.4429		6,181.644 6
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0409	0.0290	0.3208	8.9000e- 004	0.0894	7.5000e- 004	0.0902	0.0237	6.9000e- 004	0.0244		88.5936	88.5936	2.7900e- 003		88.6634
Total	0.6973	21.3971	5.2887	0.0578	1.3722	0.0691	1.4413	0.3753	0.0661	0.4414		6,259.165 6	6,259.165 6	0.4457		6,270.308 0

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119 S. Soto Avenue Project - Los Angeles-South Coast County, Winter

# 3.2 Grading - 2020

## Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/o	day							lb/c	lay		
Fugitive Dust					2.0853	0.0000	2.0853	1.1242	0.0000	1.1242			0.0000			0.0000
Off-Road	1.3498	15.0854	6.4543	0.0141		0.6844	0.6844		0.6296	0.6296	0.0000	1,365.718 3	1,365.718 3	0.4417		1,376.760 9
Total	1.3498	15.0854	6.4543	0.0141	2.0853	0.6844	2.7697	1.1242	0.6296	1.7538	0.0000	1,365.718 3	1,365.718 3	0.4417		1,376.760 9

## Mitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/d	day							lb/d	day		
Hauling	0.6564	21.3681	4.9678	0.0570	1.2827	0.0684	1.3511	0.3516	0.0654	0.4170		6,170.571 9	6,170.571 9	0.4429		6,181.644 6
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0409	0.0290	0.3208	8.9000e- 004	0.0894	7.5000e- 004	0.0902	0.0237	6.9000e- 004	0.0244		88.5936	88.5936	2.7900e- 003		88.6634
Total	0.6973	21.3971	5.2887	0.0578	1.3722	0.0691	1.4413	0.3753	0.0661	0.4414		6,259.165 6	6,259.165 6	0.4457		6,270.308 0

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# 119 S. Soto Avenue Project - Los Angeles-South Coast County, Winter

## 3.3 Building Construction - 2020

## Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/	day							lb/c	lay		
Off-Road	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960	1 1 1	0.7688	0.7688		2,001.159 5	2,001.159 5	0.3715		2,010.446 7
Total	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688		2,001.159 5	2,001.159 5	0.3715		2,010.446 7

## Unmitigated Construction Off-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/d	day							lb/c	day		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0446	1.2762	0.3689	3.0300e- 003	0.0768	6.1000e- 003	0.0829	0.0221	5.8400e- 003	0.0280		323.3389	323.3389	0.0216		323.8794
Worker	0.3015	0.2139	2.3660	6.5600e- 003	0.6595	5.5100e- 003	0.6650	0.1749	5.0800e- 003	0.1800		653.3780	653.3780	0.0206		653.8929
Total	0.3461	1.4901	2.7348	9.5900e- 003	0.7363	0.0116	0.7479	0.1970	0.0109	0.2079		976.7169	976.7169	0.0422		977.7723

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# 119 S. Soto Avenue Project - Los Angeles-South Coast County, Winter

## 3.3 Building Construction - 2020

## Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/c	lay		
Off-Road	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960	1 1 1	0.7688	0.7688	0.0000	2,001.159 5	2,001.159 5	0.3715		2,010.446 7
Total	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688	0.0000	2,001.159 5	2,001.159 5	0.3715		2,010.446 7

## Mitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/c	day							lb/c	lay		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0446	1.2762	0.3689	3.0300e- 003	0.0768	6.1000e- 003	0.0829	0.0221	5.8400e- 003	0.0280		323.3389	323.3389	0.0216		323.8794
Worker	0.3015	0.2139	2.3660	6.5600e- 003	0.6595	5.5100e- 003	0.6650	0.1749	5.0800e- 003	0.1800		653.3780	653.3780	0.0206		653.8929
Total	0.3461	1.4901	2.7348	9.5900e- 003	0.7363	0.0116	0.7479	0.1970	0.0109	0.2079		976.7169	976.7169	0.0422		977.7723

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# 119 S. Soto Avenue Project - Los Angeles-South Coast County, Winter

## 3.3 Building Construction - 2021

## Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/	day							lb/c	lay		
Off-Road	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608		2,001.220 0	2,001.220 0	0.3573		2,010.151 7
Total	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608		2,001.220 0	2,001.220 0	0.3573		2,010.151 7

## Unmitigated Construction Off-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/c	day							lb/c	lay		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0383	1.1627	0.3369	3.0000e- 003	0.0768	2.4600e- 003	0.0793	0.0221	2.3500e- 003	0.0245		320.8146	320.8146	0.0207		321.3324
Worker	0.2813	0.1924	2.1727	6.3500e- 003	0.6595	5.3300e- 003	0.6648	0.1749	4.9100e- 003	0.1798		632.6281	632.6281	0.0186		633.0935
Total	0.3196	1.3551	2.5096	9.3500e- 003	0.7363	7.7900e- 003	0.7441	0.1970	7.2600e- 003	0.2043		953.4428	953.4428	0.0393		954.4259

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# 119 S. Soto Avenue Project - Los Angeles-South Coast County, Winter

## 3.3 Building Construction - 2021

## Mitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/c	lay		
Off-Road	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608	0.0000	2,001.220 0	2,001.220 0	0.3573		2,010.151 7
Total	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608	0.0000	2,001.220 0	2,001.220 0	0.3573		2,010.151 7

## Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/c	lay		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0383	1.1627	0.3369	3.0000e- 003	0.0768	2.4600e- 003	0.0793	0.0221	2.3500e- 003	0.0245		320.8146	320.8146	0.0207		321.3324
Worker	0.2813	0.1924	2.1727	6.3500e- 003	0.6595	5.3300e- 003	0.6648	0.1749	4.9100e- 003	0.1798		632.6281	632.6281	0.0186		633.0935
Total	0.3196	1.3551	2.5096	9.3500e- 003	0.7363	7.7900e- 003	0.7441	0.1970	7.2600e- 003	0.2043		953.4428	953.4428	0.0393		954.4259
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### 119 S. Soto Avenue Project - Los Angeles-South Coast County, Winter

#### 3.4 Architectural Coating - 2021

#### Unmitigated Construction On-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/d	day							lb/d	day		
Archit. Coating	11.0924					0.0000	0.0000		0.0000	0.0000		1 1 1	0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e- 003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	11.3113	1.5268	1.8176	2.9700e- 003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309

#### Unmitigated Construction Off-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/d	day							lb/c	day		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0572	0.0391	0.4419	1.2900e- 003	0.1341	1.0800e- 003	0.1352	0.0356	1.0000e- 003	0.0366		128.6701	128.6701	3.7900e- 003		128.7648
Total	0.0572	0.0391	0.4419	1.2900e- 003	0.1341	1.0800e- 003	0.1352	0.0356	1.0000e- 003	0.0366		128.6701	128.6701	3.7900e- 003		128.7648

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### 119 S. Soto Avenue Project - Los Angeles-South Coast County, Winter

#### 3.4 Architectural Coating - 2021

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/d	day							lb/c	lay		
Archit. Coating	11.0924					0.0000	0.0000		0.0000	0.0000		1 1 1	0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e- 003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	11.3113	1.5268	1.8176	2.9700e- 003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309

#### Mitigated Construction Off-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/c	day		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0572	0.0391	0.4419	1.2900e- 003	0.1341	1.0800e- 003	0.1352	0.0356	1.0000e- 003	0.0366		128.6701	128.6701	3.7900e- 003		128.7648
Total	0.0572	0.0391	0.4419	1.2900e- 003	0.1341	1.0800e- 003	0.1352	0.0356	1.0000e- 003	0.0366		128.6701	128.6701	3.7900e- 003		128.7648

## 4.0 Operational Detail - Mobile

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### 119 S. Soto Avenue Project - Los Angeles-South Coast County, Winter

#### 4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/o	day							lb/c	lay		
Mitigated	0.8237	3.8966	9.8569	0.0326	2.6673	0.0287	2.6960	0.7138	0.0268	0.7407		3,319.646 0	3,319.646 0	0.1872		3,324.324 8
Unmitigated	0.8237	3.8966	9.8569	0.0326	2.6673	0.0287	2.6960	0.7138	0.0268	0.7407		3,319.646 0	3,319.646 0	0.1872		3,324.324 8

### 4.2 Trip Summary Information

	Aver	age Daily Trip Ra	ate	Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	265.98	265.98	265.98	908,894	908,894
Enclosed Parking with Elevator	0.00	0.00	0.00		
High Turnover (Sit Down Restaurant)	190.00	190.00	190.00	258,938	258,938
Regional Shopping Center	40.00	40.00	40.00	86,514	86,514
Total	495.98	495.98	495.98	1,254,346	1,254,346

4.3 Trip Type Information

119 S. Soto Avenue Project - Los Angeles-South Coast County, Winter

		Miles			Trip %			Trip Purpos	e %
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

#### 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891
Enclosed Parking with Elevator	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891
High Turnover (Sit Down Restaurant)	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891
Regional Shopping Center	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891

## 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

Install Energy Efficient Appliances

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119 S. Soto Avenue Project - Los Angeles-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/	day							lb/d	day		
NaturalGas Mitigated	0.0386	0.3390	0.2089	2.1000e- 003		0.0267	0.0267		0.0267	0.0267		420.8090	420.8090	8.0700e- 003	7.7100e- 003	423.3096
NaturalGas Unmitigated	0.0386	0.3390	0.2089	2.1000e- 003		0.0267	0.0267		0.0267	0.0267		420.8090	420.8090	8.0700e- 003	7.7100e- 003	423.3096

### 5.2 Energy by Land Use - NaturalGas

#### <u>Unmitigated</u>

	NaturalGa s Use	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr					lb/d	day							lb/c	lay		
Apartments Mid Rise	1985.1	0.0214	0.1829	0.0779	1.1700e- 003		0.0148	0.0148		0.0148	0.0148		233.5407	233.5407	4.4800e- 003	4.2800e- 003	234.9285
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	1580.55	0.0171	0.1550	0.1302	9.3000e- 004		0.0118	0.0118		0.0118	0.0118		185.9468	185.9468	3.5600e- 003	3.4100e- 003	187.0518
Regional Shopping Center	11.2329	1.2000e- 004	1.1000e- 003	9.3000e- 004	1.0000e- 005		8.0000e- 005	8.0000e- 005		8.0000e- 005	8.0000e- 005		1.3215	1.3215	3.0000e- 005	2.0000e- 005	1.3294
Total		0.0386	0.3390	0.2089	2.1100e- 003		0.0267	0.0267		0.0267	0.0267		420.8090	420.8090	8.0700e- 003	7.7100e- 003	423.3097

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#### 119 S. Soto Avenue Project - Los Angeles-South Coast County, Winter

#### 5.2 Energy by Land Use - NaturalGas

#### Mitigated

	NaturalGa s Use	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr					lb/e	day							lb/d	day		
Apartments Mid Rise	1.9851	0.0214	0.1829	0.0779	1.1700e- 003		0.0148	0.0148		0.0148	0.0148		233.5407	233.5407	4.4800e- 003	4.2800e- 003	234.9285
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	1.58055	0.0171	0.1550	0.1302	9.3000e- 004		0.0118	0.0118		0.0118	0.0118		185.9468	185.9468	3.5600e- 003	3.4100e- 003	187.0518
Regional Shopping Center	0.0112329	1.2000e- 004	1.1000e- 003	9.3000e- 004	1.0000e- 005		8.0000e- 005	8.0000e- 005		8.0000e- 005	8.0000e- 005		1.3215	1.3215	3.0000e- 005	2.0000e- 005	1.3294
Total		0.0386	0.3390	0.2089	2.1100e- 003		0.0267	0.0267		0.0267	0.0267		420.8090	420.8090	8.0700e- 003	7.7100e- 003	423.3097

### 6.0 Area Detail

#### 6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use only Natural Gas Hearths

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119 S. Soto Avenue Project - Los Angeles-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/	day							lb/d	Jay		
Mitigated	1.9831	1.0484	5.8826	6.5800e- 003		0.1098	0.1098		0.1098	0.1098	0.0000	1,267.700 4	1,267.700 4	0.0337	0.0231	1,275.413 8
Unmitigated	19.1621	1.4324	39.0277	0.0859		5.0717	5.0717		5.0717	5.0717	618.2166	1,197.818 0	1,816.034 6	1.8532	0.0420	1,874.868 2

### 6.2 Area by SubCategory

#### <u>Unmitigated</u>

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory					lb/c	day							lb/d	day		
Architectural Coating	0.1337					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5681					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	17.2944	1.3694	33.5644	0.0856		5.0416	5.0416		5.0416	5.0416	618.2166	1,188.000 0	1,806.216 6	1.8436	0.0420	1,864.811 8
Landscaping	0.1659	0.0631	5.4633	2.9000e- 004		0.0301	0.0301		0.0301	0.0301		9.8180	9.8180	9.5400e- 003		10.0565
Total	19.1621	1.4324	39.0277	0.0859		5.0717	5.0717		5.0717	5.0717	618.2166	1,197.818 0	1,816.034 6	1.8532	0.0420	1,874.868 2

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#### 119 S. Soto Avenue Project - Los Angeles-South Coast County, Winter

#### 6.2 Area by SubCategory

#### **Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory					lb/e	day							lb/o	day		
Architectural Coating	0.1337			, , ,		0.0000	0.0000	1	0.0000	0.0000			0.0000		1	0.0000
Consumer Products	1.5681					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.1153	0.9853	0.4193	6.2900e- 003		0.0797	0.0797		0.0797	0.0797	0.0000	1,257.882 4	1,257.882 4	0.0241	0.0231	1,265.357 3
Landscaping	0.1659	0.0631	5.4633	2.9000e- 004		0.0301	0.0301		0.0301	0.0301		9.8180	9.8180	9.5400e- 003		10.0565
Total	1.9831	1.0484	5.8826	6.5800e- 003		0.1098	0.1098		0.1098	0.1098	0.0000	1,267.700 4	1,267.700 4	0.0337	0.0231	1,275.413 8

## 7.0 Water Detail

#### 7.1 Mitigation Measures Water

Apply Water Conservation Strategy

## 8.0 Waste Detail

#### 8.1 Mitigation Measures Waste

### 9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

119 S. Soto Avenue Project - Los Angeles-South Coast County, Winter

### **10.0 Stationary Equipment**

### Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Boilers						
Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type	
User Defined Equipment						
Equipment Type	Number					
11.0 Vegetation						

119 S. Soto Avenue Project - Los Angeles-South Coast County, Summer

## 119 S. Soto Avenue Project

Los Angeles-South Coast County, Summer

### **1.0 Project Characteristics**

### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	66.00	Dwelling Unit	0.43	73,789.00	189
Regional Shopping Center	2.50	1000sqft	0.06	2,500.00	0
High Turnover (Sit Down Restaurant)	2.50	1000sqft	0.06	2,500.00	0
Enclosed Parking with Elevator	57.00	Space	0.51	22,800.00	0

#### **1.2 Other Project Characteristics**

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	12			Operational Year	2021
Utility Company	Los Angeles Department o	f Water & Power			
CO2 Intensity (Ib/MWhr)	1227.89	CH4 Intensity (Ib/MWhr)	0.029	N2O Intensity 0 (Ib/MWhr)	0.006

### 1.3 User Entered Comments & Non-Default Data

CalEEMod Version: CalEEMod.2016.3.2

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119 S. Soto Avenue Project - Los Angeles-South Coast County, Summer

Project Characteristics -

Land Use - Project Site is 1.06 ac.

Construction Phase - Estimated construction schedule.

Grading - Project Site is 1.06 ac.

Architectural Coating - Consistent with SCAQMD Rule 1113 assumed VOC content of 50 grams per liter for architectural coatings.

Vehicle Trips - Per traffic study.

Area Coating - Consistent with SCAQMD Rule 1113 assumed VOC content of 50 grams per liter for architectural coatings.

Construction Off-road Equipment Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation - Project compliance with the LA Green Building Code results in a 20% reduction in both indoor and outdoor water use.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstructionPhase	NumDays	10.00	44.00
tblConstructionPhase	NumDays	200.00	418.00
tblConstructionPhase	NumDays	4.00	22.00
tblConstructionPhase	PhaseEndDate	12/9/2020	9/7/2021
tblConstructionPhase	PhaseEndDate	11/11/2020	9/7/2021
tblConstructionPhase	PhaseEndDate	2/5/2020	1/30/2020
tblConstructionPhase	PhaseStartDate	11/26/2020	7/8/2021
tblConstructionPhase	PhaseStartDate	2/6/2020	1/31/2020

tblConstructionPhase	PhaseStartDate	1/31/2020	1/1/2020
tblGrading	AcresOfGrading	8.25	1.06
tblGrading	MaterialExported	0.00	12,908.00
tblLandUse	LandUseSquareFeet	66,000.00	73,789.00
tblLandUse	LotAcreage	1.74	0.43
tblVehicleTrips	ST_TR	6.39	4.03
tblVehicleTrips	ST_TR	158.37	76.00
tblVehicleTrips	ST_TR	49.97	16.00
tblVehicleTrips	SU_TR	5.86	4.03
tblVehicleTrips	SU_TR	131.84	76.00
tblVehicleTrips	SU_TR	25.24	16.00
tblVehicleTrips	WD_TR	6.65	4.03
tblVehicleTrips	WD_TR	127.15	76.00
tblVehicleTrips	WD_TR	42.70	16.00

#### 119 S. Soto Avenue Project - Los Angeles-South Coast County, Summer

2.0 Emissions Summary

#### 119 S. Soto Avenue Project - Los Angeles-South Coast County, Summer

#### 2.1 Overall Construction (Maximum Daily Emission)

**Unmitigated Construction** 

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year					lb/o	day							lb/d	day		
2020	2.3447	36.2066	16.1058	0.0730	6.0062	0.8075	6.7586	2.8736	0.7797	3.5683	0.0000	7,738.500 8	7,738.500 8	0.8720	0.0000	7,760.301 7
2021	13.4646	16.5372	17.8812	0.0362	0.8704	0.7872	1.6577	0.2326	0.7631	0.9957	0.0000	3,421.051 4	3,421.051 4	0.4198	0.0000	3,431.547 4
Maximum	13.4646	36.2066	17.8812	0.0730	6.0062	0.8075	6.7586	2.8736	0.7797	3.5683	0.0000	7,738.500 8	7,738.500 8	0.8720	0.0000	7,760.301 7

#### Mitigated Construction

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year					lb/	′day							lb/	′day		
2020	2.3447	36.2066	16.1058	0.0730	3.4575	0.8075	4.2099	1.4995	0.7797	2.1943	0.0000	7,738.500 8	7,738.500 8	0.8720	0.0000	7,760.301 7
2021	13.4646	16.5372	17.8812	0.0362	0.8704	0.7872	1.6577	0.2326	0.7631	0.9957	0.0000	3,421.051 4	3,421.051 4	0.4198	0.0000	3,431.547 4
Maximum	13.4646	36.2066	17.8812	0.0730	3.4575	0.8075	4.2099	1.4995	0.7797	2.1943	0.0000	7,738.500 8	7,738.500 8	0.8720	0.0000	7,760.301 7
	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	37.06	0.00	30.28	44.24	0.00	30.11	0.00	0.00	0.00	0.00	0.00	0.00

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### 119 S. Soto Avenue Project - Los Angeles-South Coast County, Summer

### 2.2 Overall Operational

#### Unmitigated Operational

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/c	day							lb/c	lay		
Area	19.1621	1.4324	39.0277	0.0859		5.0717	5.0717		5.0717	5.0717	618.2166	1,197.818 0	1,816.034 6	1.8532	0.0420	1,874.868 2
Energy	0.0386	0.3390	0.2089	2.1000e- 003		0.0267	0.0267		0.0267	0.0267		420.8090	420.8090	8.0700e- 003	7.7100e- 003	423.3096
Mobile	0.8481	3.8190	10.2579	0.0343	2.6673	0.0286	2.6958	0.7138	0.0267	0.7405		3,491.345 8	3,491.345 8	0.1868		3,496.015 8
Total	20.0488	5.5904	49.4945	0.1223	2.6673	5.1269	7.7942	0.7138	5.1250	5.8389	618.2166	5,109.972 8	5,728.189 4	2.0481	0.0497	5,794.193 6

#### Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/	day							lb/d	day		
Area	1.9831	1.0484	5.8826	6.5800e- 003		0.1098	0.1098		0.1098	0.1098	0.0000	1,267.700 4	1,267.700 4	0.0337	0.0231	1,275.413 8
Energy	0.0386	0.3390	0.2089	2.1000e- 003		0.0267	0.0267	 , , , ,	0.0267	0.0267		420.8090	420.8090	8.0700e- 003	7.7100e- 003	423.3096
Mobile	0.8481	3.8190	10.2579	0.0343	2.6673	0.0286	2.6958	0.7138	0.0267	0.7405		3,491.345 8	3,491.345 8	0.1868		3,496.015 8
Total	2.8697	5.2064	16.3494	0.0430	2.6673	0.1650	2.8322	0.7138	0.1631	0.8769	0.0000	5,179.855 1	5,179.855 1	0.2285	0.0308	5,194.739 2

#### 119 S. Soto Avenue Project - Los Angeles-South Coast County, Summer

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	85.69	6.87	66.97	64.84	0.00	96.78	63.66	0.00	96.82	84.98	100.00	-1.37	9.57	88.84	38.05	10.35

### **3.0 Construction Detail**

#### **Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2020	1/30/2020	5	22	
2	Building Construction	Building Construction	1/31/2020	9/7/2021	5	418	
3	Architectural Coating	Architectural Coating	7/8/2021	9/7/2021	5	44	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 1.06

Acres of Paving: 0.51

Residential Indoor: 149,423; Residential Outdoor: 49,808; Non-Residential Indoor: 7,500; Non-Residential Outdoor: 2,500; Striped Parking Area: 1,368 (Architectural Coating – sqft)

OffRoad Equipment

119 S. Soto Avenue Pro	ect - Los Anaeles-South	Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Building Construction	Welders	3	8.00	46	0.45

#### Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	3	8.00	0.00	1,614.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	59.00	12.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	12.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

## **3.1 Mitigation Measures Construction**

Water Exposed Area

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119 S. Soto Avenue Project - Los Angeles-South Coast County, Summer

### 3.2 Grading - 2020

### Unmitigated Construction On-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/o	day							lb/c	lay		
Fugitive Dust					4.6340	0.0000	4.6340	2.4982	0.0000	2.4982			0.0000			0.0000
Off-Road	1.3498	15.0854	6.4543	0.0141		0.6844	0.6844		0.6296	0.6296		1,365.718 3	1,365.718 3	0.4417		1,376.760 9
Total	1.3498	15.0854	6.4543	0.0141	4.6340	0.6844	5.3184	2.4982	0.6296	3.1279		1,365.718 3	1,365.718 3	0.4417		1,376.760 9

#### Unmitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day 0.6408 21.0950 4.6745 0.0580 1.2827 0.0673 1.3501 0.3516 0.0644 0.4160												lb/c	day		
Hauling	0.6408	21.0950	4.6745	0.0580	1.2827	0.0673	1.3501	0.3516	0.0644	0.4160		6,278.693 4	6,278.693 4	0.4274		6,289.377 6
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0368	0.0262	0.3503	9.4000e- 004	0.0894	7.5000e- 004	0.0902	0.0237	6.9000e- 004	0.0244		94.0890	94.0890	2.9700e- 003		94.1632
Total	0.6777	21.1212	5.0247	0.0589	1.3722	0.0681	1.4402	0.3753	0.0651	0.4404		6,372.782 5	6,372.782 5	0.4303		6,383.540 8

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119 S. Soto Avenue Project - Los Angeles-South Coast County, Summer

### 3.2 Grading - 2020

#### Mitigated Construction On-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/o	day							lb/c	lay		
Fugitive Dust	1 1 1				2.0853	0.0000	2.0853	1.1242	0.0000	1.1242			0.0000			0.0000
Off-Road	1.3498	15.0854	6.4543	0.0141		0.6844	0.6844		0.6296	0.6296	0.0000	1,365.718 3	1,365.718 3	0.4417		1,376.760 9
Total	1.3498	15.0854	6.4543	0.0141	2.0853	0.6844	2.7697	1.1242	0.6296	1.7538	0.0000	1,365.718 3	1,365.718 3	0.4417		1,376.760 9

#### Mitigated Construction Off-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/d	day							lb/c	day		
Hauling	0.6408	21.0950	4.6745	0.0580	1.2827	0.0673	1.3501	0.3516	0.0644	0.4160		6,278.693 4	6,278.693 4	0.4274		6,289.377 6
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0368	0.0262	0.3503	9.4000e- 004	0.0894	7.5000e- 004	0.0902	0.0237	6.9000e- 004	0.0244		94.0890	94.0890	2.9700e- 003	,	94.1632
Total	0.6777	21.1212	5.0247	0.0589	1.3722	0.0681	1.4402	0.3753	0.0651	0.4404		6,372.782 5	6,372.782 5	0.4303		6,383.540 8

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### 119 S. Soto Avenue Project - Los Angeles-South Coast County, Summer

#### 3.3 Building Construction - 2020

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/c	lay		
Off-Road	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688		2,001.159 5	2,001.159 5	0.3715		2,010.446 7
Total	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688		2,001.159 5	2,001.159 5	0.3715		2,010.446 7

#### Unmitigated Construction Off-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/c	day							lb/c	lay		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0427	1.2765	0.3345	3.1100e- 003	0.0768	6.0100e- 003	0.0828	0.0221	5.7500e- 003	0.0279		332.4296	332.4296	0.0203		332.9368
Worker	0.2715	0.1932	2.5833	6.9700e- 003	0.6595	5.5100e- 003	0.6650	0.1749	5.0800e- 003	0.1800		693.9066	693.9066	0.0219		694.4535
Total	0.3142	1.4696	2.9177	0.0101	0.7363	0.0115	0.7478	0.1970	0.0108	0.2079		1,026.336 2	1,026.336 2	0.0422		1,027.390 3

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### 119 S. Soto Avenue Project - Los Angeles-South Coast County, Summer

#### 3.3 Building Construction - 2020

### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/c	lay		
Off-Road	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960	1 1 1	0.7688	0.7688	0.0000	2,001.159 5	2,001.159 5	0.3715		2,010.446 7
Total	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688	0.0000	2,001.159 5	2,001.159 5	0.3715		2,010.446 7

#### Mitigated Construction Off-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/d	day							lb/c	lay		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0427	1.2765	0.3345	3.1100e- 003	0.0768	6.0100e- 003	0.0828	0.0221	5.7500e- 003	0.0279		332.4296	332.4296	0.0203		332.9368
Worker	0.2715	0.1932	2.5833	6.9700e- 003	0.6595	5.5100e- 003	0.6650	0.1749	5.0800e- 003	0.1800		693.9066	693.9066	0.0219		694.4535
Total	0.3142	1.4696	2.9177	0.0101	0.7363	0.0115	0.7478	0.1970	0.0108	0.2079		1,026.336 2	1,026.336 2	0.0422		1,027.390 3

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## 119 S. Soto Avenue Project - Los Angeles-South Coast County, Summer

#### 3.3 Building Construction - 2021

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/	day							lb/c	lay		
Off-Road	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843	1 1 1	0.6608	0.6608		2,001.220 0	2,001.220 0	0.3573		2,010.151 7
Total	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608		2,001.220 0	2,001.220 0	0.3573		2,010.151 7

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/c	day		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0365	1.1651	0.3046	3.0900e- 003	0.0768	2.3800e- 003	0.0792	0.0221	2.2800e- 003	0.0244		329.8568	329.8568	0.0194		330.3426
Worker	0.2529	0.1738	2.3764	6.7400e- 003	0.6595	5.3300e- 003	0.6648	0.1749	4.9100e- 003	0.1798		671.8742	671.8742	0.0198		672.3691
Total	0.2894	1.3389	2.6810	9.8300e- 003	0.7363	7.7100e- 003	0.7440	0.1970	7.1900e- 003	0.2042		1,001.731 0	1,001.731 0	0.0392		1,002.711 7

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### 119 S. Soto Avenue Project - Los Angeles-South Coast County, Summer

#### 3.3 Building Construction - 2021

### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/c	lay		
Off-Road	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843	1 1 1	0.6608	0.6608	0.0000	2,001.220 0	2,001.220 0	0.3573		2,010.151 7
Total	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608	0.0000	2,001.220 0	2,001.220 0	0.3573		2,010.151 7

#### Mitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/c	lay		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0365	1.1651	0.3046	3.0900e- 003	0.0768	2.3800e- 003	0.0792	0.0221	2.2800e- 003	0.0244		329.8568	329.8568	0.0194		330.3426
Worker	0.2529	0.1738	2.3764	6.7400e- 003	0.6595	5.3300e- 003	0.6648	0.1749	4.9100e- 003	0.1798		671.8742	671.8742	0.0198		672.3691
Total	0.2894	1.3389	2.6810	9.8300e- 003	0.7363	7.7100e- 003	0.7440	0.1970	7.1900e- 003	0.2042		1,001.731 0	1,001.731 0	0.0392		1,002.711 7

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### 119 S. Soto Avenue Project - Los Angeles-South Coast County, Summer

#### 3.4 Architectural Coating - 2021

### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/d	day							lb/c	lay		
Archit. Coating	11.0924					0.0000	0.0000		0.0000	0.0000		1 1 1	0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e- 003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	11.3113	1.5268	1.8176	2.9700e- 003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309

### Unmitigated Construction Off-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/c	day							lb/c	day		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0514	0.0354	0.4833	1.3700e- 003	0.1341	1.0800e- 003	0.1352	0.0356	1.0000e- 003	0.0366		136.6524	136.6524	4.0300e- 003		136.7530
Total	0.0514	0.0354	0.4833	1.3700e- 003	0.1341	1.0800e- 003	0.1352	0.0356	1.0000e- 003	0.0366		136.6524	136.6524	4.0300e- 003		136.7530

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#### 119 S. Soto Avenue Project - Los Angeles-South Coast County, Summer

#### 3.4 Architectural Coating - 2021

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/d	day							lb/c	lay		
Archit. Coating	11.0924					0.0000	0.0000		0.0000	0.0000		1 1 1	0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e- 003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	11.3113	1.5268	1.8176	2.9700e- 003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309

#### Mitigated Construction Off-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/c	day		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0514	0.0354	0.4833	1.3700e- 003	0.1341	1.0800e- 003	0.1352	0.0356	1.0000e- 003	0.0366		136.6524	136.6524	4.0300e- 003		136.7530
Total	0.0514	0.0354	0.4833	1.3700e- 003	0.1341	1.0800e- 003	0.1352	0.0356	1.0000e- 003	0.0366		136.6524	136.6524	4.0300e- 003		136.7530

## 4.0 Operational Detail - Mobile

Page 16 of 22

### 119 S. Soto Avenue Project - Los Angeles-South Coast County, Summer

#### 4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/d	day							lb/d	lay		
Mitigated	0.8481	3.8190	10.2579	0.0343	2.6673	0.0286	2.6958	0.7138	0.0267	0.7405		3,491.345 8	3,491.345 8	0.1868		3,496.015 8
Unmitigated	0.8481	3.8190	10.2579	0.0343	2.6673	0.0286	2.6958	0.7138	0.0267	0.7405		3,491.345 8	3,491.345 8	0.1868		3,496.015 8

#### 4.2 Trip Summary Information

	Aver	age Daily Trip Ra	te	Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	265.98	265.98	265.98	908,894	908,894
Enclosed Parking with Elevator	0.00	0.00	0.00		
High Turnover (Sit Down Restaurant)	190.00	190.00	190.00	258,938	258,938
Regional Shopping Center	40.00	40.00	40.00	86,514	86,514
Total	495.98	495.98	495.98	1,254,346	1,254,346

4.3 Trip Type Information

#### 119 S. Soto Avenue Project - Los Angeles-South Coast County, Summer

		Miles			Trip %			Trip Purpos	e %
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

#### 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891
Enclosed Parking with Elevator	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891
High Turnover (Sit Down Restaurant)	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891
Regional Shopping Center	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891

## 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

Install Energy Efficient Appliances

Page 18 of 22

### 119 S. Soto Avenue Project - Los Angeles-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day									lb/c	lay					
NaturalGas Mitigated	0.0386	0.3390	0.2089	2.1000e- 003		0.0267	0.0267		0.0267	0.0267		420.8090	420.8090	8.0700e- 003	7.7100e- 003	423.3096
NaturalGas Unmitigated	0.0386	0.3390	0.2089	2.1000e- 003		0.0267	0.0267		0.0267	0.0267		420.8090	420.8090	8.0700e- 003	7.7100e- 003	423.3096

### 5.2 Energy by Land Use - NaturalGas

#### <u>Unmitigated</u>

	NaturalGa s Use	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr		lb/day									lb/e	Jay				
Apartments Mid Rise	1985.1	0.0214	0.1829	0.0779	1.1700e- 003		0.0148	0.0148		0.0148	0.0148		233.5407	233.5407	4.4800e- 003	4.2800e- 003	234.9285
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	1580.55	0.0171	0.1550	0.1302	9.3000e- 004		0.0118	0.0118		0.0118	0.0118		185.9468	185.9468	3.5600e- 003	3.4100e- 003	187.0518
Regional Shopping Center	11.2329	1.2000e- 004	1.1000e- 003	9.3000e- 004	1.0000e- 005		8.0000e- 005	8.0000e- 005		8.0000e- 005	8.0000e- 005		1.3215	1.3215	3.0000e- 005	2.0000e- 005	1.3294
Total		0.0386	0.3390	0.2089	2.1100e- 003		0.0267	0.0267		0.0267	0.0267		420.8090	420.8090	8.0700e- 003	7.7100e- 003	423.3097

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#### 119 S. Soto Avenue Project - Los Angeles-South Coast County, Summer

#### 5.2 Energy by Land Use - NaturalGas

#### Mitigated

	NaturalGa s Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr		lb/day										lb/d	day			
Apartments Mid Rise	1.9851	0.0214	0.1829	0.0779	1.1700e- 003		0.0148	0.0148		0.0148	0.0148		233.5407	233.5407	4.4800e- 003	4.2800e- 003	234.9285
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	1.58055	0.0171	0.1550	0.1302	9.3000e- 004		0.0118	0.0118		0.0118	0.0118		185.9468	185.9468	3.5600e- 003	3.4100e- 003	187.0518
Regional Shopping Center	0.0112329	1.2000e- 004	1.1000e- 003	9.3000e- 004	1.0000e- 005		8.0000e- 005	8.0000e- 005		8.0000e- 005	8.0000e- 005		1.3215	1.3215	3.0000e- 005	2.0000e- 005	1.3294
Total		0.0386	0.3390	0.2089	2.1100e- 003		0.0267	0.0267		0.0267	0.0267		420.8090	420.8090	8.0700e- 003	7.7100e- 003	423.3097

### 6.0 Area Detail

### 6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use only Natural Gas Hearths

Page 20 of 22

119 S. Soto Avenue Project - Los Angeles-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day									lb/d	day					
Mitigated	1.9831	1.0484	5.8826	6.5800e- 003		0.1098	0.1098		0.1098	0.1098	0.0000	1,267.700 4	1,267.700 4	0.0337	0.0231	1,275.413 8
Unmitigated	19.1621	1.4324	39.0277	0.0859		5.0717	5.0717		5.0717	5.0717	618.2166	1,197.818 0	1,816.034 6	1.8532	0.0420	1,874.868 2

### 6.2 Area by SubCategory

#### <u>Unmitigated</u>

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory												lb/d	day			
Architectural Coating	0.1337					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5681					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	17.2944	1.3694	33.5644	0.0856		5.0416	5.0416		5.0416	5.0416	618.2166	1,188.000 0	1,806.216 6	1.8436	0.0420	1,864.811 8
Landscaping	0.1659	0.0631	5.4633	2.9000e- 004		0.0301	0.0301		0.0301	0.0301		9.8180	9.8180	9.5400e- 003		10.0565
Total	19.1621	1.4324	39.0277	0.0859		5.0717	5.0717		5.0717	5.0717	618.2166	1,197.818 0	1,816.034 6	1.8532	0.0420	1,874.868 2

Page 21 of 22

#### 119 S. Soto Avenue Project - Los Angeles-South Coast County, Summer

### 6.2 Area by SubCategory

#### **Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory		Ib/day										lb/o	day			
Architectural Coating	0.1337			, , ,		0.0000	0.0000	1	0.0000	0.0000			0.0000		1	0.0000
Consumer Products	1.5681					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.1153	0.9853	0.4193	6.2900e- 003		0.0797	0.0797		0.0797	0.0797	0.0000	1,257.882 4	1,257.882 4	0.0241	0.0231	1,265.357 3
Landscaping	0.1659	0.0631	5.4633	2.9000e- 004		0.0301	0.0301		0.0301	0.0301		9.8180	9.8180	9.5400e- 003		10.0565
Total	1.9831	1.0484	5.8826	6.5800e- 003		0.1098	0.1098		0.1098	0.1098	0.0000	1,267.700 4	1,267.700 4	0.0337	0.0231	1,275.413 8

## 7.0 Water Detail

#### 7.1 Mitigation Measures Water

Apply Water Conservation Strategy

## 8.0 Waste Detail

#### 8.1 Mitigation Measures Waste

### 9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

119 S. Soto Avenue Project - Los Angeles-South Coast County, Summer

### **10.0 Stationary Equipment**

### Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
<u>Boilers</u>						
Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type	
User Defined Equipment						
Equipment Type	Number					
11.0 Vegetation						

Appendix B

Noise Monitoring Data



**PES** POMEROY ENVIRONMENTAL SERVICES

Noise Monitoring and Sensitive Receptor Location Map

## 119 S. Soto St. - Location 1

# Information Panel

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# Summary Data Panel

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# Logged Data Table

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### Logged Data Chart



## Statistics Chart



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## Calibration History

 Date
 Calibration Action
 Level
 Cal. Model Type
 Serial Number
 Cert. Due Date



## NOISE MONITORING FIELD REPORT

#### Site Ma

Site Map

Project Name: Los Lirios Mixed-Use				
Monitoring Address: <u>119 S. Soto Street</u>	THE DE			
Date: <u>4/3/19</u> Site Number: <u></u>	- AND AND			
Measured By: <u>Holly Galbreath</u>	AND AS AND AND			
Weather Conditions: 63, Mostly Cloudy	The state of the state of the			
Wind Speed: $3$ mph Wind Direction: From <u>SSE</u>	- The state of the			
Measurement Start Time: 12:20 pm				
Measurement End Time: 0:35 pm	Total Measurement Time:15 min			
Noise Meter Model:3M SoundPro SP DL-1Calibration:114.0 (dBA)				
Meter Setting: <u>A-Weighted Sound Level (SLOW)</u> Session File Name: <u>SOO8</u>				
Primary Noise Sources: Traffic, pedestrian, residential activity - Soto St				

Data Summary floot solved actual solo Other Noise Sources During Monitoring and stad

Noise	Noise Level	1	î levois	Time:	<u>azio</u> M
Scale	(dBA)		(A8		
	1001	2	5	_ Time:	
Leq	68.8	2		Timor	ped .
	1201111	3		_ nme:	3
Lmax	81.4	4		Time:	xem-l
$L_{min}$	53.7	5	2	Time: _	minu

Additional Notes:

Additional Notes



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#### 119 S. Soto St. - Location 2

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#### NOISE MONITORING FIELD REPORT

#### Site Map

Site Map

Project Name: Los Lirios Mixed-Use	
Monitoring Address: <u>119 S. Soto Street</u>	Contraction in the second
Date: 4/3/19 Site Number: 2	CAR CAR
Measured By: <u>Holly Galbreath</u>	AND AS AND
Weather Conditions: <u>63°, Mastly</u> Cloudy	A Property of the property of
Wind Speed: <u>3</u> mph Wind Direction: From <u>SSE</u>	2 Destable
Measurement Start Time: 12:00 pm	
Measurement End Time: 13:15 pm	Total Measurement Time: 15 min
Noise Meter Model: 3M SoundPro SP DL-1	Calibration: <u>114.0</u> (dBA)
Meter Setting: A-Weighted Sound Level (SLOW)	Session File Name: 5007
Primary Noise Sources: Traffic, Dedestrian a	ctivity - 1st St seames and maning

Data Summary throad graned consured and Other Noise Sources During Monitoring and istal

Noise	Noise Level	1	.1 14	Time:
Scale	(dBA)			Scale (dBA)
1	(PAR)	2	2.	Time:
Leq	66.7	3 '		Time:
L <sub>max</sub>	75.8	4.	b.	Time:
L <sub>min</sub>	57.2	5	2	Time:

Additional Notes:

#### Additional Notes:



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#### 119 S. Soto St. - Location 3

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#### NOISE MONITORING FIELD REPORT

Site Map

The Solar State
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The states of th
2 Parts States Ha
Total Measurement Time:15 min
Calibration: <u>114.0</u> (dBA)
Session File Name: <u>SOO9</u>
hool activity - Breed St.

**Data Summary** 

#### **Other Noise Sources During Monitoring**



Additional Notes:



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Transportation Impact Study

TRANSPORTATION IMPACT STUDY LOS LIRIOS MIXED-USE PROJECT City of Los Angeles, California July 18, 2018

Prepared for:

East LA Community Corporation 2917 E. 1<sup>st</sup> Street, Suite 101 Los Angeles, California 90033

LLG Ref. 1-18-4288-1

Prepared by:

Under the Supervision of:

Chin S. Taing, PTP Transportation Planner III Alfred C. Ying, P.E., PTP Senior Transportation Engineer Linscott, Law & Greenspan, Engineers

600 S. Lake Avenue Suite 500 Pasadena, CA 91106

**626.796.2322 т** 626.792.0941 г www.llgengineers.com

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## **A**PPENDICES

#### Appendix

- A. Traffic Study Memorandum of Understanding
- B. Traffic Count Data
- C. CMA and Levels of Service Explanation CMA Data Worksheets – Weekday AM and PM Peak Hours

# TRANSPORTATION IMPACT STUDY LOS LIRIOS MIXED-USE PROJECT

City of Los Angeles, California July 18, 2018

## 1.0 INTRODUCTION

This traffic analysis has been conducted to identify and evaluate the potential traffic impacts of the proposed Los Lirios Mixed-Use project ("proposed project" herein) on the surrounding street system. The proposed project site is located at 113, 119 and 121 South Soto Street, and 2316, 2322, and 2400 East  $1^{st}$  Street in the Boyle Heights Community Plan area of the City of Los Angeles, California. The proposed Los Lirios Mixed-Use project location and general vicinity are shown in *Figure 1-1*.

#### 1.1 Traffic Study Overview

The traffic analysis follows City of Los Angeles traffic study guidelines<sup>1</sup> and is consistent with traffic impact assessment guidelines set forth in the Los Angeles County Congestion Management Program<sup>2</sup>. This traffic analysis evaluates potential project-related impacts at five (5) key intersections in the vicinity of the project site. The study intersections were determined in consultation with City of Los Angeles Department of Transportation (LADOT) staff. The Critical Movement Analysis method was used to determine Volume-to-Capacity ratios and corresponding Levels of Service for all five study intersections. A review also was conducted of Los Angeles County Metropolitan Transportation Authority freeway and intersection monitoring stations to determine if a Congestion Management Program transportation impact assessment analysis is required for the proposed project. In addition, a screening analysis was also completed as it relates to the State of California Department of Transportation (Caltrans) highway system.

This study (i) presents existing traffic volumes, (ii) includes existing traffic volumes with the forecast traffic volumes from the proposed project, (iii) determines existing with project-related impacts, (iv) forecasts future cumulative baseline traffic volumes, (v) forecasts future traffic volumes with the proposed project, (vi) determines future forecast with project-related impacts, and (vii) recommends mitigation measures, where necessary.

### 1.2 Study Area

Upon coordination with LADOT staff, five (5) study intersections have been identified for evaluation during the weekday morning and afternoon peak hours. The five study locations provide local access to the study area and define the extent of the boundaries for this traffic impact analysis. Further discussion of the existing street system and study area is provided in Section 4.0.

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<sup>&</sup>lt;sup>1</sup> Transportation Impact Study Guidelines, City of Los Angeles Department of Transportation, December 2016.

<sup>&</sup>lt;sup>2</sup> 2010 Congestion Management Program, Los Angeles County Metropolitan Transportation Authority, October 2010.



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The general location of the project in relation to the study locations and surrounding street system is presented in *Figure 1-1*. The traffic analysis study area is generally comprised of those locations which have the greatest potential to experience significant traffic impacts due to the proposed project as defined by the Lead Agency. In the traffic engineering practice, the study area generally includes those intersections that are:

- a. Immediately adjacent or in close proximity to the project site;
- b. In the vicinity of the project site that are documented to have current or projected future adverse operational issues; and
- c. In the vicinity of the project site that are forecast to experience a relatively greater percentage of project-related vehicular turning movements (e.g., at freeway ramp intersections).

The locations selected for analysis were based on the above criteria, proposed Los Lirios Mixed-Use project peak hour vehicle trip generation, the anticipated distribution of project vehicular trips, and existing intersection/corridor operations.

Following the "Freeway Impact Analysis Procedures" agreement between the State of California Department of Transportation (Caltrans) District 7 and LADOT executed in October 2013 and amended in December 2015, the traffic study Memorandum of Understanding (MOU) was subsequently updated to include a review of the screening filter to determine if a project would be required to prepare a freeway analysis in accordance with Caltrans requirements which are beyond the requirements established in the CMP. *Appendix A* includes the approved MOU as part of the formal traffic study scoping process with LADOT staff. As noted in the approved MOU, the amount of project-related traffic did not meet the criteria requiring a focused analysis of State facilities. Therefore, no further review of the Caltrans freeway system is required for the Los Lirios Mixed-Use project.

### 1.3 Overview of Senate Bill 743

On September 27, 2013, Governor Brown signed Senate Bill (SB) 743 (Steinberg, 2013). Among other things, SB 743 creates a process to change the methodology to analyze transportation impacts under CEQA (Public Resources Code section 21000 and following), which could include analysis based on project vehicle miles traveled (VMT) rather than impacts to intersection Level of Service. On December 30, 2013, the State of California Governor's Office of Planning and Research (OPR) released a preliminary evaluation of alternative methods of transportation analysis. The intent of the original guidance documentation was geared first towards projects located within areas that are designated as transit priority areas, to be followed by other areas of the State. OPR issued other draft discussion documents in March 2015 and January 2016, suggesting some new revisions to the State CEQA Guidelines. In November 2017, OPR submitted the proposed amendments to the CEQA Guidelines to the State's Natural Resources Agency (that include a proposed new Guidelines section 15064.3 which governs how VMT-based analyses of potential traffic impacts should be conducted).

On January 26, 2018, the Natural Resources Agency published a Notice of Rulemaking, commencing the formal rulemaking process for the amendments to the CEQA Guidelines. The Natural Resources Agency's rulemaking process will entail additional public review and comment and may lead to further revisions. OPR updated the technical advisory that accompanies the revised CEQA Guidelines in April 2018 suggesting some new revisions to the state CEQA Guidelines. OPR has therefore not issued any final revisions to the state CEQA Guidelines to implement the CEQA traffic analysis component of SB 743; thus, the analysis in this study utilizes existing, long-established protocols in accordance with CEQA, the existing state CEQA Guidelines, and the City's current significance thresholds.

## 2.0 PROJECT DESCRIPTION

The proposed project is located in the Boyle Heights Community Plan area of the City of Los Angeles, California. The proposed project includes two separate sites: Site A located at 119, 121, and 113 Soto Street and 2316 and 2322 East 1<sup>st</sup> Street and the adjacent Site B located at 2400 East 1<sup>st</sup> Street. Site A is bordered by the Metro Gold Line Soto Street station and 1<sup>st</sup> Street to the north, existing residential development to the south, Soto Street to the east and an alleyway to the west. The existing project Site A is comprised of six total parcels of vacant land and is located adjacent to the Metro Gold Line Soto Street station at 2330 East 1<sup>st</sup> Street.

The existing project Site B is bounded by  $1^{st}$  Street to the north, existing residential development to the south, an existing alleyway to the east, and Soto Street to the west. Site B is comprised of two lots, and is currently fenced and occupied by the historic Victorian house (i.e., Peabody Werden Duplex) which was previously relocated to this site in the year 2016. An aerial photograph of the existing project site is contained in *Figure 2-1*.

### 2.1 Project Location<sup>3</sup>

Boyle Heights is situated at the eastern boundary of the City of Los Angeles and is surrounded by the City of Vernon to the south, the unincorporated community of East Los Angeles to the east, the communities of Lincoln Heights and El Sereno to the north, and the Los Angeles River and downtown to the west. The Boyle Heights Community Plan area contains 3,807 acres or roughly six square miles. It contains a mix of residential, commercial, industrial, open space and public facility land.

The topography of Boyle Heights is generally flat and the street grid system is oriented for east-west travel. The major east-west arterials are Marengo Avenue, Cesar Chavez Avenue, 1<sup>st</sup> Street, 4<sup>th</sup> Street, Whittier Boulevard, Olympic Boulevard and Washington Boulevard. These streets provide through regional access from downtown to the outlying communities beyond East Los Angeles such as Monterey Park, Whittier, Montebello and Santa Fe Springs. The major north-south arterials are Soto Street, Lorena Street and Indiana Street. Evergreen Avenue also provides north-south access but is narrow at the southern portion of Boyle Heights and ends at the northern border of the Community Plan area.

### 2.2 Proposed Project Description

The project applicant, in partnership with the Los Angeles County Metropolitan Transportation Authority (Metro), seeks to obtain entitlements to construct a mixed-use project with affordable housing apartments and ground floor local community serving retail/restaurant land use components on Site A. The 66 total residential units are expected to comprise of 14 studio units, 19 one-bedroom units, 16 two-bedroom units, and 17 three-bedroom units, all of which are planned to be affordable housing units. Site A will also include an approximate 1,490 square-foot community room as well

<sup>&</sup>lt;sup>3</sup> Source: *Boyle Heights Community Plan*; A Part of the General Plan-City of Los Angeles; www.lacity.org/PLN (General Plans).

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as other amenities provided for the residents including office space, computer/conference room, laundry room, and a landscaped private internal courtyard. Up to 5,000 square feet of local community serving retail/restaurant uses are also planned as part of the project and will predominantly front Soto Street. Site B will primarily consist of the restoration and rehabilitation of the historic Peabody Werden Duplex with landscaping enhancements. As of the preparation of this traffic analysis, the project description for Site B is not yet defined. As such, the traffic analysis contained herein evaluates the potential traffic impacts associated with Site A development only. Should the project description for Site B be determined and is intensified, additional traffic analyses may be required. Construction of the proposed project is expected to commence in year 2020 with occupancy in the year 2021. The site plan for the proposed project is illustrated in *Figure 2-2*.

Vehicular access to the proposed project (Site A) will be provided via one driveway located on the alleyway along the west side of the building, which will accommodate access to the subterranean parking spaces for the residential and commercial parking. Further discussion of the project's site access and circulation scheme is provided in Section 3.0.

#### 2.3 Roadway Dedication and Widening

The project site (Site A) is adjacent to Soto Street and the alley. Provisions in the Municipal Code require the City to consider half-street dedications and improvements for roadways adjacent to development sites in accordance with adopted standards in the City's General Plan Mobility Element. Soto Street is identified as an Avenue II in the Mobility Element. The standard cross-section for an Avenue II is a 56-foot roadway on an 86-foot right-of-way (or a 28-foot half roadway on a 43-foot half right-of-way as measured from the centerline). The alleyway is identified as an Access Roadway in the Mobility Element. The standard cross-section for an Access Roadway is a 20-foot right-of-way (or 10-foot half right of-way as measured from the centerline).

Review of site plan for Soto Street show an existing half roadway width of 28 feet and a half rightof-way width of 41.25 feet. The City could ultimately require roadway dedication of 1.75 feet adjacent to the project site to comply with the Avenue II half-street standard (i.e., 28-foot half roadway on a 43-foot half right-of-way). Review of the site plan for the alleyway show an existing half right-of-way width of 6 feet. The City could require a roadway dedication of four feet adjacent to the project site to comply with the Access Roadway half-street standard.



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## 3.0 SITE ACCESS AND CIRCULATION

The proposed site access and circulation scheme for the project is displayed in *Figure 2-2*. Descriptions of the existing and proposed site access and circulation schemes are provided in the following subsections.

### 3.1 Vehicular Site Access

### 3.1.1 Existing Site Vehicular Access

As shown in *Figure 2-1*, the existing project Site A currently accommodates vehicular access via an existing driveway on the west side of Soto Street at the southeast corner of the site. No access is currently provided via the existing alleyway adjacent to the site. For Site B, one driveway curb cut is located on the south side of 1<sup>st</sup> Street along the property frontage.

### 3.1.2 *Proposed Project Vehicular Site Access*

The planned site access scheme for the Los Lirios Mixed-Use project is displayed in *Figure 2-2*. Direct vehicular access to the proposed Site A project will be provided by a driveway accessed via the existing alleyway. No direct access is provided via Soto Street or  $1^{st}$  Street adjacent to Site A. A description of the planned Site A access point is provided in the following paragraph.

### • Project Driveway

The project driveway will be located on the east side of the alleyway along the westerly property frontage, at the southwest corner of the project site. The project driveway will accommodate left-turn and right-turn vehicular ingress and egress turning movements. The project site driveway has been located to provide direct access to and from the subterranean parking level. The project site driveway will be constructed to City of Los Angeles design standards.

### 3.2 Pedestrian Access

As noted previously, the Los Lirios Mixed-Use project is located within the Boyle Heights Community Plan area of the City of Los Angeles. Based on the existing high level of pedestrian activity in the area due to the proximity of the Metro Gold Line Soto Street station and the Soto Street corridor, it is anticipated that significant pedestrian patronage of the proposed project commercial land use components will occur. The project is well located to encourage pedestrian activity and walking as a transportation mode.<sup>4</sup> As indicated in *Figure 2-2*, the proposed project is being designed to provide connections to the adjacent public sidewalks and would include site enhancements to promote walkability. Walkability is a term for the extent to which walking is readily available as a safe, connected, accessible and pleasant mode of transport. There are several criteria that are widely accepted as key aspects of the walkability of urban areas that should be satisfied. The underlying principle is that pedestrians should not be delayed, diverted, or placed in danger. The widely accepted characteristics of walkability are as follows:

- Connectivity: People can walk from one place to another without encountering major obstacles, obstructions, or loss of connectivity.
- Convivial: Pedestrian routes are friendly and attractive, and are perceived as such by pedestrians.
- Conspicuous: Suitable levels of lighting, visibility and surveillance over its entire length, with high quality delineation and signage.
- Comfortable: High quality and well-maintained footpaths of suitable widths, attractive landscaping and architecture, shelter and rest spaces, and a suitable allocation of roadspace to pedestrians.
- Convenient: Walking is a realistic travel choice, partly because of the impact of the other criteria set forth above, but also because walking routes are of a suitable length as a result of land use planning with minimal delays.

A review of the project site location and pedestrian walkway network indicates that these five primary characteristics are accommodated as part of the proposed project. The project site is accessible from nearby public bus and rail transit stops as well as other amenities along nearby major corridors. The majority of pedestrian access to the project site is envisioned to occur via the existing public sidewalks provided along every street in the project study area. The project site is accessible to the retail, restaurant, and other commercial businesses located along the Soto Street, Cesar Chavez Avenue, 1<sup>st</sup> Street and 4<sup>th</sup> Street corridors for project employees and residents. In addition, the site's internal pedestrian walkways and adjacent sidewalks will be appropriately landscaped and adorned to provide a friendly walking environment.

<sup>&</sup>lt;sup>4</sup> For example, refer to <u>http://www.walkscore.com/</u>, which generates a walkability score of approximately 92 (Walker's Paradise) out of 100 for the project site. Walk Score calculates the walkability of an address by locating nearby stores, restaurants, schools, parks, etc. Walk Score measures how easy it is to live a car-lite lifestyle—not how pretty the area is for walking.

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### 3.3 Bicycle Access

Bicycle access to the project site is facilitated by the City of Los Angeles bicycle roadway network.<sup>5</sup> Existing or proposed bicycle facilities (e.g., Class I Bicycle Path, Class II Bicycle Lanes, Class III Bicycle Routes, Proposed Bicycle Routes, Bicycle Friendly Streets, etc.) in the City's 2010 Bicycle Plan are located within an approximate one-mile radius from the project site.<sup>6</sup> It is important to note that the 2010 Bicycle Plan goals and policies have been folded into the Mobility 2035 Plan to reflect a commitment to a balanced, multi-modal viewpoint. The location of designated bikeways in close proximity to the project site and in the surrounding area is shown in *Figure 3-1*. The proposed Citywide Bikeway System in close proximity to the project site is situated in a fairly flat area near downtown Los Angeles. Bicycling as a transportation mode can be accommodated especially when used in combination with transit opportunities in the project site area.

The Federal and State transportation system recognizes three primary bikeway facilities: Bicycle Paths (Class I), Bicycle Lanes (Class II), and Bicycle Routes (Class III). Bicycle Paths (Class I) are exclusive car free facilities that are typically not located within a roadway area. Bicycle Lanes (Class II) are part of the street design that is dedicated only for bicycles and identified by a striped lane separating vehicle lanes from bicycle lanes. Bicycle Routes (Class III) are preferably located on collector and lower volume arterial streets.

Use of bicycles as a transportation mode to and from the project site should be encouraged by the provision of ample and safe parking. The type of spaces and dimensions will be provided based on City Code requirements (refer to Los Angeles Municipal Code Sections 12.21.A.16 and 12.21 A.4(c)), as well as to meet the needs of a variety of bicycles. In accordance with the Municipal Code, the following long-term and short-term bicycle parking requirements applicable to the proposed project are as follows:

•	Residential Use (1-25 units):	One (1.0) long-term bicycle parking space per each dwelling unit/guestroom. One (1.0) short-term bicycle parking space per 10 dwelling units/guestrooms.
•	Residential Use (26-100 units):	One (1.0) long-term bicycle parking space per each 1.5 dwelling unit/guestroom. One (1.0) short-term bicycle parking space per 15 dwelling units/guestrooms.

<sup>&</sup>lt;sup>5</sup> Walk Score also calculates a bike score based on the topography, number and proximity of bike lanes, etc., near the project site. For example, refer to <u>http://www.walkscore.com/</u>, which generates a bike score of approximately 72 (Very Bikeable) out of 100 for the project site. Walk Score calculates the bike score of an address by locating nearby bicycling facilities as well as connections to bus/rail transit routes and stops. Walk Score measures how easy it is to live a car-lite lifestyle-not how pretty the area is for bicycling.

<sup>&</sup>lt;sup>6</sup> Source: City of Los Angeles Bicycle Parking Plan; www.labikeplan.org.

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• Commercial Use: One (1.0) long-term bicycle parking space per 2,000 square feet. One (1.0) short-term bicycle parking space per 2,000 square feet.

Through application of the Municipal Code regulations, the following bicycle parking requirement would be calculated for the proposed project:

• Residential Use:	<ul> <li>25 DU x 1.0 space/DU = 25 long-term bicycle spaces</li> <li>25 DU x 1.0 space/10 DU = 3 short-term bicycle spaces</li> <li>41 DU x 1.0 space/1.5 DU = 27 long-term bicycle spaces</li> <li>41 DU x 1.0 space/15 DU = 3 short-term bicycle spaces</li> </ul>
• Commercial Use:	5,000 GSF x 1.0 space/2,000 GSF = 3 long-term bicycle spaces 5,000 GSF x 1.0 space/2,000 GSF = 3 short-term bicycle spaces

Based on the above calculations, the Code bicycle parking requirement for the proposed project totals 55 long-term bicycle spaces and 9 short-term bicycle spaces. The proposed Los Lirios Mixed-Use project is planned to provide 70 long-term bicycle spaces and 10 short-term bicycle spaces which satisfies the Code bicycle parking requirement. The bicycle spaces should be provided in a readily accessible location(s). The selected location(s) will encourage use and maintain visibility for personal safety and theft protection. Appropriate lighting will be provided to increase safety and provide theft protection during night-time parking.

## 4.0 EXISTING STREET SYSTEM

### 4.1 Local Street System

Immediate access to the Los Lirios Mixed-Use project and associated parking facility will be provided via the proposed driveway located on the east side of the alleyway along the westerly property frontage which can be accessed from 1<sup>st</sup> Street. The following five (5) study intersections were selected for analysis in consultation with LADOT staff in order to determine potential impacts related to the proposed project:

- 1. Breed Street/1<sup>st</sup> Street
- 2. Soto Street/Cesar E. Chavez Avenue
- 3. Soto Street/1<sup>st</sup> Street
- 4. Soto Street/4<sup>th</sup> Street
- 5. Mott Street/1<sup>st</sup> Street

The study intersections selected for analysis in the traffic study also are noted in *Figure 1-1*. All of the existing study intersections are presently controlled by traffic signals. The existing roadway configurations and intersection controls at the study intersections are displayed in *Figure 4-1*.

### 4.2 Roadway Classifications

The City of Los Angeles utilizes the roadway categories recognized by regional, state and federal transportation agencies. There are four categories in the roadway hierarchy, ranging from freeways with the highest capacity to two-lane undivided roadways with the lowest capacity. The roadway categories are summarized as follows:

- *Freeways* are limited-access and high speed travel ways included in the state and federal highway systems. Their purpose is to carry regional through-traffic. Access is provided by interchanges with typical spacing of one mile or greater. No local access is provided to adjacent land uses.
- *Arterial* roadways are major streets that primarily serve through-traffic and provide access to abutting properties as a secondary function. Arterials are generally designed with two to six travel lanes and their major intersections are signalized. This roadway type is divided into two categories: principal and minor arterials. Principal arterials are typically four-or-more lane roadways and serve both local and regional through-traffic. Minor arterials are typically two-to-four lane streets that service local and commute traffic.
- *Collector* roadways are streets that provide access and traffic circulation within residential and non-residential (e.g., commercial and industrial) areas. Collector roadways connect local streets to arterials and are typically designed with two through travel lanes (i.e., one through travel lane



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in each direction) that may accommodate on-street parking. They may also provide access to abutting properties.

• *Local* roadways distribute traffic within a neighborhood, or similar adjacent neighborhoods, and are not intended for use as a through-street or a link between higher capacity facilities such as collector or arterial roadways. Local streets are fronted by residential uses and do not typically serve commercial uses.

### 4.3 Roadway Descriptions

A review of the important roadways in the project site vicinity and study area is summarized in *Table 4-1*. As indicated in *Table 4-1*, the important roadways within the project study area were reviewed in terms of the number of lanes provided, median types, and posted speed limits, etc. Additionally, the roadway classifications of key roads in the project study area also are presented in *Table 4-1*.

### 4.4 Existing Transit Services<sup>7</sup>

Extensive public bus and rail transit service is provided within the Los Lirios Mixed-Use project study area. Public bus transit service is currently provided by Los Angeles County Metropolitan Transit Authority (Metro) and Montebello Transit Service. The Metro Gold Line light rail line is located in close proximity to the project site with the nearest station at Soto Street immediately adjacent to the site. A summary of the existing transit service, including the transit route, destinations and peak hour headways is presented in *Table 4-2*. The existing public transit routes in the Los Lirios Mixed-Use project site vicinity are illustrated in *Figure 4-2*.

<sup>&</sup>lt;sup>7</sup> Walk Score also calculates a transit score based on the number and proximity of bus and rail routes near the project site. For example, refer to <u>http://www.walkscore.com/</u>, which generates a transit score of approximately 67 (Good Transit) out of 100 for the project site. Walk Score calculates the transit score of an address by locating nearby bus/rail transit routes and stops. Walk Score measures how easy it is to live a car-lite lifestyle—not how pretty the area is for using transit service.

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#### Table 4-1 EXISTING ROADWAY DESCRIPTIONS

		Travel	Lanes	Median	Speed
Roadway	Classification [1]	Direction [2] No. Lanes [3]		Types [4]	Limit
Breed Street	Local Street	N-S	2 [5]	N/A	25
Soto Street					
(Wabash Ave. to 60 Fwy.)	Avenue II	N-S	4	N/A	35
Mott Street					
(Wabash Ave. to Whittier Blvd.) Collector Street		N-S	2 [5]	N/A	25
Cesar E Chavez Avenue					
(St. Louis St. to Mott St.)	Avenue II (Modified)	E-W	4	N/A	30
(Mott St. to Lorena St.) Avenue II		E-W	4	N/A	30
1st Street Avenue II		E-W	2 [6]	NA/2WLT	30
4th Street	Avenue II	E-W	4	N/A	35

Notes:

[1] Roadway classifications obtained from the City of Los Angeles General Plan, September 2016.

[2] Direction of roadways in the project area: N/S - North/South; and E/W - East/West.

[3] Number of lanes in both directions of the roadway.

[4] Median type of the road: RMI - Raised Median Island; 2WLT - 2-Way Left-Turn Lane; and N/A-Not Applicable.

[5] Bike Route (Class III)

[6] Bike Lane (Class II)

Table 4-2 EXISTING TRANSIT ROUTES [1]

		ROADWAY(S)	NO. O DURI	JF BUSES/TR	AINS OUR
ROUTE	DESTINATIONS	NEAR SITE	DIR	AM	PM
Metro 30/330	West Hollywood to East Los Angeles via Beverly Hills, Los Angeles and Doumbount of Angeles	Soto Street, Mott Street, 1st Street	EB WR	3	7 5
Metro 68	Los Angeles to Montebello via East Los Angeles and Monterey Park	Soto Street, Cesar E Chavez Avenue	EB WB	4 4	9 4 4
Metro 106	East Los Angeles to Boyle Heights	Soto Street, 4th Street	EB WB		0 0
Metro 251	Cypress Park to Lynwood via Lincoln Heights, Boyle Heights, Huntington Park and South Gate	Soto Street, Cesar E Chavez Avenue, 1st Street, 4th Street	NB SB	4 ω	יט יט
Metro 252	Boyle Heights to Montecito Heights via Lincoln Heights and El Sereno	Soto Street, Cesar E Chavez Avenue, 1st Street, 4th Street	NB SB	<i>ო ო</i>	<i>ი</i> თ
Metro 605	Boyle Heights	Soto Street, Cesar E Chavez Avenue, 1st Street, 4th Street	NB SB	4 4	44
Metro 751	Huntington Park to Cypress Park via Boyle Heights and Lincoln Heights	Soto Street, Cesar E Chavez Avenue, 1st Street, 4th Street	NB SB	4 5	4 4
Metro 770	El Monte to Downtown Los Angeles via South El Monte, Monterey Park and East Los Angeles	Soto Street, Cesar E Chavez Avenue	EB WB	5 4	5 5

[1] Sources: Los Angeles County Metropolitan Transportation Authority (Metro) and City of Montebello Bus Lines websites, 2018.

Table 4-2 (Continued) EXISTING TRANSIT ROUTES [1]

		ROADWAY(S)	NO. O DURI	F BUSES/TR NG PEAK H	AINS JUR
ROUTE	DESTINATIONS	NEAR SITE	DIR	AM	PM
Metro Gold Line	East Los Angeles to Azusa via Los Angeles, Highland Park, South Pasadena, Pasadena, Arcadia, Monrovia, Duarte and Irwindale	Soto Street, 1st Street	EB WB	8 8	∞ ∞
Montebello Line 40	Whittier to Downtown Los Angeles via Montebello, East Los Angeles and Boyle Heights	Soto Street, 4th Street	EB WB	5	ي م ب
			lotal	81	86

[1] Sources: Los Angeles County Metropolitan Transportation Authority (Metro) and City of Montebello Bus Lines websites, 2018.



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## 5.0 TRAFFIC COUNTS

Manual counts of vehicular turning movements were conducted at each of the five study intersections during the weekday morning (AM) and afternoon (PM) commute periods to determine the peak hour traffic volumes. The manual counts were conducted by an independent traffic count subconsultant (NDS Services) at the five study intersections from 7:00 to 10:00 AM to determine the weekday AM peak commute hour and from 3:00 to 6:00 PM to determine the weekday PM peak commute hour. In conjunction with the manual turning movement vehicle counts, a count of bicycle and pedestrian volumes were also collected during the peak periods. It is noted that all of the traffic counts were conducted when local schools were in session. Traffic volumes at the study intersections show the typical peak periods between 7:00 to 10:00 AM and 3:00 to 6:00 PM generally associated with metropolitan Los Angeles weekday peak commute hours.

The weekday AM and PM peak hour manual counts of vehicle movements at the study intersections are summarized in *Table 5-1*. The existing traffic volumes at the study intersections during the weekday AM and PM peak hours are shown in *Figures 5-1* and *5-2*, respectively. Summary data worksheets of the manual traffic counts at the study intersections are contained in *Appendix B*.

#### Table 5-1 EXISTING TRAFFIC VOLUMES [1] WEEKDAY AM AND PM PEAK HOURS

				AM PE	AM PEAK HOUR		PM PEAK HOUR	
NO.	INTERSECTION	DATE	DIR	BEGAN	VOLUME	BEGAN	VOLUME	
1	Breed Street/	05/24/2018	NB	7:15	142	5:00	136	
	1st Street		SB		98		91	
			EB		394		695	
			WB		870		517	
2	Soto Street/	05/24/2018	NB	7:00	670	5:00	1,029	
	Cesar E. Chavez Avenue		SB		925		735	
			EB		368		821	
			WB		1,140		623	
3	Soto Street/	05/24/2018	NB	7:15	626	5:00	1,062	
	1st Street		SB		838		608	
			EB		416		701	
			WB		957		537	
4	Soto Street/	05/24/2018	NB	7:15	662	5:00	1,101	
	4th Street		SB		968		651	
			EB		491		1,155	
			WB		1,148		583	
5	Mott Street/	05/24/2018	NB	7:15	229	5:00	264	
	1st Street		SB		200		143	
			EB		393		679	
			WB		848		454	

[1] Counts conducted by National Data & Surveying Services



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#### 6.0 CUMULATIVE DEVELOPMENT PROJECTS

The forecast of future pre-project conditions was prepared in accordance with procedures outlined in Section 15130 of the CEQA Guidelines. Specifically, the CEQA Guidelines provide two options for developing the future traffic volume forecast:

"(A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the [lead] agency, or

(B) A summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. Such plans may include: a general plan, regional transportation plan, or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projections may be supplemented with additional information such as a regional modeling program. Any such document shall be referenced and made available to the public at a location specified by the lead agency."

Accordingly, the traffic analysis provides a highly conservative estimate of future pre-project traffic volumes as it incorporates both the "A" and "B" options outlined in the CEQA Guidelines for purposes of developing the forecast.

#### 6.1 Related Projects

A forecast of on-street traffic conditions prior to occupancy of the proposed project was prepared by incorporating the potential trips associated with other known development projects (related projects) in the area. With this information, the potential impact of the proposed project can be evaluated within the context of the cumulative impact of all ongoing development. The related projects research was based on information on file at the City of Los Angeles Departments of Transportation and Planning. The list of related projects in the project site area is presented in *Table 6-1*. The location of the related projects is shown in *Figure 6-1*.

Traffic volumes expected to be generated by the related projects were calculated using rates provided in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*<sup>8</sup> and trip data as provided by LADOT. The related projects' respective traffic generation for the weekday AM and PM peak hours, as well as on a daily basis for a typical weekday, is summarized in *Table 6-1*. The distribution of the related projects traffic volumes to the study intersections during the weekday AM and PM peak hours are displayed in *Figures 6-2* and *6-3*, respectively.

<sup>&</sup>lt;sup>8</sup> Institute of Transportation Engineers, *Trip Generation Manual*, 9<sup>th</sup> Edition, 2012, Washington, D.C.

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# Table-6-1 RELATED PROJECTS LIST AND TRIP GENERATION [1]

MAP	PROJECT	PROJECT NAME/NUMBER	LAND USE DATA		PROJECT DATA	DAILY TRIP ENDS [2]	ΜΑ V	PEAK HOUF	~	Md	PEAK HOUR OLUMES [2]	
NO.	STATUS	ADDRESS/LOCATION	LAND-USE	SIZE	SOURCE	VOLUMES	N	OUT	TOTAL	NI	OUT	TOTAL
-	Proposed	USC Health Science Campus 1510 N. San Pablo Street	Medical Office Research & Development	120,000 GSF 465,000 GSF	[1]	7,715	613	140	753	161	613	774
0	Proposed	Boyle Heights MU Specific Plan 2901 E. Olympic Boulevard	Apartment Retail Office Medical Office Daywar Center Library	4,400 DU 185,000 GLSF 125,000 GSF 25,000 GSF 15,000 GSF 15,000 GSF	Ξ	19,382	463	1,044	1,507	1,123	804	1,927
ŝ	Proposed	Santa Fe Freight Yard Redevelopment 950 East 3rd Street	Apartment Retail/Restaurant School	<ul><li>635 DU</li><li>30,062 GLSF</li><li>532 Students</li></ul>	[1]	6,372	162	177	339	245	213	458
4	Proposed	Lorena Plaza Mixed-Use 3401 E. 1st Street	Apartment Retail	49 DU 10,000 GLSF	[1]	458	9	18	24	25	17	42
5	Proposed	Coca Cola Mixed-Use 963 E. 4th Street	Office Retail Restaurant	78,600 GSF 25,000 GLSF 20,000 GSF	[1]	2,512	106	22	128	113	138	251
9	Proposed	2051 E. 7th Street	Apartment Restaurant Retail	320 DU 5,000 GSF 15,000 GLSF	[1]	2,310	17	127	144	145	64	209
7	Proposed	826 S. Maleo Street	Condominium Retail Restaurant	90 DU 11,000 GLSF 5,600 GSF	[1]	1,267	Π	34	45	62	39	101
8	Proposed	555 S. Mateo Street	Retail	153,000 GLSF	[1]	4,300	5	30	35	220	205	425
6	Proposed	2030 E. 7th Street	Office Retail	243,583 GSF 40,000 GLSF	Ξ	2,306	274	34	308	69	249	318
10	Proposed	540 S. Santa Fe Avenue	Office	89,825 GSF	[1]	726	90	12	102	17	81	98
11	Proposed	1030 N. Soto Street	Hotel	81 Rooms	[1]	662	25	18	43	25	23	48
12	Proposed	2407 E. 1st Street	Apartment Retail	81 DU 5,000 GLSF	[1]	450	2	18	20	22	14	36
13	Proposed	Metro Emergency Security Operations Center 410 N. Center Street	Office	110,000 GSF	[1]	1,165	87	0	87	0	79	79
14	Proposed	500 S. Mateo Street	Restaurant	12,882 GSF	[1]	1,052	48	41	89	50	31	81
15	Proposed	2130 E. Violet Street	Office Retail	94,000 GSF 7,500 GLSF	[1]	1,351	137	30	167	39	122	161
16	Proposed	929 E. 2nd Street	Retail Other	37,974 GLSF 71,078 GSF	[1]	2,153	68	12	80	105	96	201
17	Proposed	La Vernuta Mixed-Use 2420 E. Cesar Chavez Avenue	Apartment Bank Health Club	77 DU 4,000 GSF 4,000 GSF	[1]	1,087	25	36	61	54	44	98
18	Proposed	520 S. Mateo Street CPC-2016-3853	Apartment Office	600 DU 30,000 GSF	[1]	4,995	157	220	377	274	223	497

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Table-6-1 (Continued) RELATED PROJECTS LIST AND TRIP GENERATION [1]

ModelStringsModel<	Mit         STOTES         MODESING CATION         MODESING CATION <t< th=""><th>MAP</th><th>PROJECT</th><th>PROJECT NAME/NIIMBER</th><th>LAND USE DATA</th><th></th><th>PROJECT DATA</th><th>DAILY TRIP ENDS [2]</th><th>MA V</th><th>I PEAK HOUF OLUMES [2]</th><th>¥</th><th>Md</th><th>PEAK HOUR</th><th></th></t<>	MAP	PROJECT	PROJECT NAME/NIIMBER	LAND USE DATA		PROJECT DATA	DAILY TRIP ENDS [2]	MA V	I PEAK HOUF OLUMES [2]	¥	Md	PEAK HOUR	
	0         1	NO.	STATUS	ADDRESS/LOCATION	LAND-USE	SIZE	SOURCE	VOLUMES	N	OUT	TOTAL	NI	OUT	TOTAL
$   \   \   \   \   \   \   \   \   \   $	1         Protect         Description         Description <thdescription< th=""> <thdescription< th=""> <thdescriptio< td=""><td>18</td><td></td><td></td><td>Retail Restaurant</td><td>15,000 GLSF 15,000 GSF</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></thdescriptio<></thdescription<></thdescription<>	18			Retail Restaurant	15,000 GLSF 15,000 GSF								
31       Proposed       Syst Connorseed       April Manuta       130       10       130       10       130       10       13       10       13       10       13       10       13       10       13<	0         1         10000 </td <td>19</td> <td>Proposed</td> <td>2650 E. Olympic Boulevard</td> <td>Apartment Office Supermarket High-Turnover Restaurant Drinking Place Retail Coffee Shop Bank</td> <td>1,030 DU 219,238 GSF 31,285 GSF 26,070 GSF 15,642 GSF 15,642 GISF 15,642 GSF 2,607 GSF 2,607 GSF</td> <td>Ξ</td> <td>12,247</td> <td>498</td> <td>447</td> <td>945</td> <td>5.99</td> <td>539</td> <td>1,138</td>	19	Proposed	2650 E. Olympic Boulevard	Apartment Office Supermarket High-Turnover Restaurant Drinking Place Retail Coffee Shop Bank	1,030 DU 219,238 GSF 31,285 GSF 26,070 GSF 15,642 GSF 15,642 GISF 15,642 GSF 2,607 GSF 2,607 GSF	Ξ	12,247	498	447	945	5.99	539	1,138
	1         Propose         Seg E statistic Monocol (15,6)         Monocol Mon	20	Proposed	527 S. Colyton Street ENV-2016-3400-EIR	Apartment Retail Office	310 DU 11,375 GLSF 11,736 GSF	[1]	2,095	36	116	152	121	74	195
	2         Popose         Work in the contraction of the contraction	21	Proposed	940 E. 4th Street ENV-2017-611-EAF	Apartment Retail Office	93 DU 14,248 GLSF 6,000 GSF	[1]	788	14	37	51	44	31	75
23       Proposed       60.8 Sam Fr Avene       00.8 Sam Fr Avene       0.08 Sam Fr Avene       0.18 GeF       11       1.30       90       8       93       11       13         24       Proposed       443 Stocknet       Emenning Stool       0.3 Stanter       6.50 GFF       11       1.30       90       12       24       114       137         25       Proposed       314 Stocknet       Emenning Stool       0.3 Stanter       0.3 Stanter       0.3 Stanter       2.30       11       1.31       121       112       2.31       121       131 </td <td>21       Proposed       600 S Sami F. Arene       0000 Sami F. Arene       000 Sami F. Arene</td> <td>22</td> <td>Proposed</td> <td>806 E. 3rd Street</td> <td>Restaurant</td> <td>18,327 GSF</td> <td>[1]</td> <td>253</td> <td>1</td> <td>(1)</td> <td>0</td> <td>13</td> <td>7</td> <td>20</td>	21       Proposed       600 S Sami F. Arene       0000 Sami F. Arene       000 Sami F. Arene	22	Proposed	806 E. 3rd Street	Restaurant	18,327 GSF	[1]	253	1	(1)	0	13	7	20
	31       Proposed       43.5 strong rest       Elementry School       65       Strong       11       211       112       213	23	Proposed	640 S. Santa Fe Avenue	Office Retail Restaurant	91,185 GSF 9,430 GLSF 6,550 GSF	[1]	1,330	90	×	86	43	114	157
$ \frac{1}{2} = \frac{1}{2} + 1$	35         Proposed         245 E. Vaiet Street         Amment         330 DL         4477         329         121         4471         329         123         450         139         320           36         Proposed         66 S. Maco Street         Manent         27.80 DL         110         190         59         145         106         59         145         106         50         105         106         50         106         106         50         106         106         50         106         106         50         106         106         50         106         106         50         106         106         50         106 <td>24</td> <td>Proposed</td> <td>443 S. Soto Street</td> <td>Elementary School</td> <td>625 Students</td> <td>[1]</td> <td>277</td> <td>131</td> <td>112</td> <td>243</td> <td>32</td> <td>25</td> <td>57</td>	24	Proposed	443 S. Soto Street	Elementary School	625 Students	[1]	277	131	112	243	32	25	57
	26         Proposed         66.8.Mates Stretc         Apartment         18 <du< th="">         10         90         90         91         15         16</du<>	25	Proposed	2143 E. Violet Street	Apartment Office Retail	320 DU 224,292 GSF 46,670 GLSF	[1]	4,477	329	122	451	130	330	460
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	$ \frac{1}{10} = \frac{1}{10000000000000000000000000000000000$	26	Proposed	676 S. Mateo Street	Apartment Retail	185 DU 27,280 GLSF	[1]	1,990	50	95	145	106	51	157
	$ \frac{3}{201}  \frac{200 \text{ Centre Street}}{100000000000000000000000000000000000$	27	Proposed	Sobo House 1000 S. Santa Fe Avenue	Market Health Club Restaurant	14,193 GSF 6,793 GSF 10,065 GSF	[1]	2,029	194	30	224	57	192	249
$ \frac{29}{10}  \frac{810 \text{ E}}{1437}  \frac{1}{1437}  \frac{3}{3}  \frac{3}{3}  \frac{1}{3}  \frac{1}{3}  \frac{1}{3}  \frac{1}{3}  \frac{3}{3}  \frac{1}{3}  \frac{3}{3}  \frac{1}{3}  \frac{1}{3}  \frac{1}{3}  \frac{3}{3}  \frac{3}{3}  \frac{1}{3}  \frac{3}{3}  \frac{1}{3}  \frac{3}{3}  \frac{1}{3}  \frac{3}{3}  \frac{1}{3}  \frac{1}{3}$	29         Proposed         810 E. 3rd. Street         Apartment         4 DU         [1]         1.487         37         32         69         87         48         1           30         Proposed         2110 Bay Street         Africutable Housing         [1] 1.350         57         32         69         87         48         192         7           31         Proposed         2016 CBN 44566         Africutable Housing         [1] 1.350         657         [1]         2.344         180         63         243         89         192         7           31         Proposed         2016 CBN 44566         Office         255,500         65F         1         1         2,344         180         63         73         89         192         7           31         Proposed         COC-2017-409 GPA         Retail         4,356         615F         1         343         365         76         76         74         192         7           31         Proposed         COC-2017-409 GPA         Retail         24,30         615         7         4,30         615         7         4,30         76         4,31         760         7,34         7,30         7,34         7,	28	Proposed	220 N. Center Street 2017-CEN-46412	Apartment Retail	430 DU 8,742 GLSF	[1]	2,166	33	119	152	121	62	200
30         Proposed         2110 Bay Street         Apartment         9 DU         [1]         2.394         180         6.3         2.43         89         192         281	30         Proposed         210 Bay Street         Apartment         9 DU         [1] DU         2394         180         63         243         89         192         3           31         Proposed         2016.CEN.44566         Affordable Housing         11.3.30 GSF         13.350 GSF         13.330 GSF         13.350 GSF         13.350 GSF         13.350 GSF         13.350 GSF         13.350 GSF         13.493         365         76         441         100         324         5	29	Proposed	810 E. 3rd Street	Apartment Restaurant Retail	4 DU 3,541 GSF 6,171 GLSF	[1]	1,487	37	32	69	87	48	135
31         Proposed         401 S. Hewiti Street         Office         255500 GSF         [1]         3,493         365         76         441         100         324         424           COC-2017-469-GPA         Retail         4,970         GLSF         9,940         GSF         1         2,5289         365         76         441         100         324         424           COC-2017-469-GPA         Restaurant         9,940         GSF         9         10         9         3         10         10         9         3         10         10         10         10         10         10	31     Proposed     401 S. Hewin Street     Office     255,500 GSF     [1]     3,493     365     76     441     100     324     4       COC-2017-469-GPA     Retail     4,970 GLSF     9,940 GSF     [1]     3,493     365     76     441     100     324     4       IOTAL       ISOURS: City of Los Angeles Department of Transportation (LADOT) and Department of City Planning (LADCP). The peak hour traffic volumes were forecast based on trip data provided by LADOT and by applying trip rates as provided in the THE "Trip Generation OLADOT).     7,523     4,291     5,061     9,3.	30	Proposed	2110 Bay Street 2016-CEN-44566	Apartment Affördable Housing Office Retail	<ul> <li>99 DU</li> <li>11 DU</li> <li>113,350 GSF</li> <li>43,657 GLSF</li> </ul>	Ξ	2,394	180	63	243	88	192	281
TOTAL 95,289 4,254 3,269 7,523 4,291 5,061 9,352	TOTAL       95,289       4,254       3,369       7,523       4,291       5,061       9,3         [1] Sources: City of Los Angeles Department of Transportation (LADOT) and Department of Caty Planning (LADCP). The peak hour traffic volumes were forecast based on trip data provided by LADOT and by applying trip rates as provided in the TTB: "Trip Generation Mauual", 9th Edition, 2012.       4,291       5,061       9,33         [1] TIB: "Trip Generation Manual", 9th Edition, 2012.       [2] This are one vorterific movements. entering: or leaving.       [2] Trips are one vorterific movements. entering:       10       [2] Trips are one vorterific movements.       [2] Trips are one vorterific movements.       [2] Trips are one vorterific movements.       [3] Trips are one vorterific movements.       [4] Trip are one vorterif	31	Proposed	401 S. Hewitt Street COC-2017-469-GPA	Office Retail Restaur ant	255,500 GSF 4,970 GLSF 9,940 GSF	[1]	3,493	365	76	441	100	324	424
	<ol> <li>Sources: City of Los Angeles Department of Transportation (LADOT) and Department of City Planning (LADCP). The peak hour traffic volumes were forecast based on trip data provided by LADOT and by applying trip rates as provided in the ITE "Trip Generation Manual", 9th Edition, 2012.</li> <li>Thuss are one-ways traffic movements, entering or leaving.</li> </ol>	FOTAL						95,289	4,254	3,269	7,523	4,291	5,061	9,352

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#### 6.2 Ambient Traffic Growth Factor

Horizon year background traffic growth estimates have been calculated using an ambient traffic growth factor. The ambient traffic growth factor is intended to include unknown related projects in the study area as well as account for typical growth in traffic volumes due to the development of projects outside the study area. Ambient traffic growth in the Los Angeles area is presented in the 2010 Congestion Management Program for Los Angeles County (the "CMP manual") and determined in consultation with LADOT staff. It is noted that based on review of the general traffic growth factors provided in the CMP manual for the Central/Southeast area (RSA 23 – Downtown Los Angeles, Exposition Park, MacArthur Park), it is anticipated that the existing traffic volumes are expected to increase at an annual rate of less than 1.0% per year between the years 2010 and 2020. An annual growth rate of one percent (1.0%) to the buildout year 2021 was used for analysis purposes. Thus, application of this annual growth factor allows for a conservative, worst case forecast of future traffic volumes in the area. Further, it is noted that the CMP manual's traffic growth rate is intended to anticipate future traffic generated by development projects in the project vicinity. Thus, the inclusion in this traffic analysis of both a forecast of traffic generated by known related projects plus the use of an ambient growth traffic factor based on CMP traffic model data results in a conservative estimate of future traffic volumes at the study intersections.

## 7.0 TRAFFIC FORECASTING METHODOLOGY

In order to estimate the traffic impact characteristics of the Los Lirios Mixed-Use project, a multistep process has been utilized. The first step is trip generation, which estimates the total arriving and departing traffic volumes on a peak hour and daily basis. The traffic generation potential is forecast by applying the appropriate vehicle trip generation equations or rates to the project development tabulation.

The second step of the forecasting process is trip distribution, which identifies the origins and destinations of inbound and outbound project traffic volumes. These origins and destinations are typically based on demographics and existing/anticipated travel patterns in the study area.

The third step is traffic assignment, which involves the allocation of project traffic to study area streets and intersections. Traffic assignment is typically based on minimization of travel time, which may or may not involve the shortest route, depending on prevailing operating conditions and travel speeds. Traffic distribution patterns are indicated by general percentage orientation, while traffic assignment allocates specific volume forecasts to individual roadway links and intersection turning movements throughout the study area.

With the forecasting process complete and project traffic assignments developed, the impact of the proposed project is isolated by comparing operational (i.e., Levels of Service) conditions at the selected key intersections using existing and expected future traffic volumes without and with forecast project traffic. The significance of the project's impacts can then be identified based on the current City traffic impact analysis guidelines and the need for site-specific and/or cumulative local area traffic improvements can then be evaluated.

#### 7.1 Project Traffic Generation

Traffic volumes expected to be generated by the proposed project during the weekday AM and PM peak hours, as well as on a daily basis, were estimated using rates as published in the ITE *Trip Generation Manual*<sup>9</sup> or provided by LADOT. As published in the *City of Los Angeles Transportation Impact Study Guidelines*, affordable housing trip rates for family and senior units derived from the independent study conducted in 2016 of affordable housing sites in the City of Los Angeles were used to forecast the weekday AM and PM peak hour traffic volumes expected to be generated by the affordable housing residential component. Traffic volumes expected to be generated by the community room, retail, and restaurant land use components of the proposed project were based upon rates per 1,000 gross square feet. The following ITE trip generation rates were used in the trip generation forecasts:

- ITE Land Use Code 495 Recreational Community Room
- ITE Land Use Code 820 Shopping Center

<sup>&</sup>lt;sup>9</sup> Institute of Transportation Engineers, *Trip Generation Manual*, 10<sup>th</sup> Edition, 2017, Washington, D.C.

• ITE Land Use Code 932 – High-Turnover [Sit-Down] Restaurant

The ITE manual contains trip rates for a variety of land uses (including office buildings, shopping centers, condominiums, apartments, etc.), which have been derived based on traffic counts conducted at existing sites. However, the traffic count data submitted to ITE is for free-standing sites generally located in suburban locations, which likely do not reflect the trip generation characteristics for projects located in urban areas such as where the proposed project is situated. Thus, the trip rates provided in the ITE *Trip Generation Manual* (derived from traffic counts at suburban projects) would be expected to overstate the trip generation potential of projects located in the Boyle Heights area of the City of Los Angeles, including the proposed Los Lirios Mixed-Use project.

In addition to the trip generation forecast for the proposed project, a forecast was made of the likely pass-by trips that could be anticipated at the site. Pass-by trips are made as intermediate stops on the way from an origin to a primary trip destination without a route diversion. Pass-by trips are attracted from traffic passing the site on an adjacent street or roadway that offers direct access to the generator. Pass-by trip adjustments of 50 percent and 20 percent were applied to the traffic volume forecast for the retail and restaurant components, respectively, pursuant to the LADOT policy.

A trip reduction adjustment was also employed in the project trip generation forecast to account for the proximity to the existing adjacent Metro transit station at Soto Street, as well as the high level of bus transit opportunities and pedestrian activity in the project study area. Based on LADOT traffic study guidelines and discussions with LADOT staff, a transit trip reduction factor of 15 percent (15%) would be applicable to the proposed project based on the project's proximity to the Metro Gold Line Soto Street station and public bus transit routes in the area. However, no other adjustments were made to the project trip generation forecasts to account for trips made internal to the project site (i.e., internal capture).

The weekday trip generation rates and forecast of the vehicular trips anticipated to be generated by the proposed project are presented in *Table 7-1*. The trip generation forecast for the proposed project was submitted for review and approval by LADOT staff. As presented in *Table 7-1*, the proposed project is expected to generate 48 vehicle trips (22 inbound trips and 26 outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the proposed project is expected to generate 41 vehicle trips (23 inbound trips and 18 outbound trips). Over a 24-hour period, the proposed project is forecast to generate 496 daily trip ends during a typical weekday (248 inbound trips and 248 outbound trips).

# Table 7-1 PROJECT TRIP GENERATION [1]

		DAILY	AM	PEAK H	OUR	PM	PEAK HO	DUR
		TRIP ENDS [2]	V	JLUMES	[2]	V	JLUMES	[2]
LAND USE	SIZE	VOLUMES	IN	OUT	TOTAL	IN	OUT	TOTAL
Proposed Uses								
Apartment [3]	66 DU	270	13	20	33	12	10	22
Less Transit Adjustment (15%) [4]		(41)	(2)	(3)	(5)	(2)	(2)	(4)
Community Room [5]	1,490 GSF	43	2	1	3	1	2	3
Less Transit Adjustment (15%) [4]		(6)	nom.	nom.	nom.	nom.	nom.	nom.
Retail [6]	2,500 GLSF	94	1	1	2	5	5	10
Less Pass-by Adjustment (50%) [7]		(47)	(1)	(1)	(2)	(3)	(3)	(6)
Less Transit Adjustment (15%) [4]		(7)	nom.	nom.	nom.	nom.	nom.	nom.
High-Turnover (Sit-Down) Restaurant [8]	2,500 GSF	280	14	11	25	15	9	24
Less Pass-by Adjustment (20%) [7]		(56)	(3)	(2)	(5)	(3)	(2)	(5)
Less Transit Adjustment (15%) [4]		(34)	(2)	(1)	(3)	(2)	(1)	(3)
NET TOTAL PROJECT TRIPS		496	22	26	48	23	18	41

[1] Source: ITE "Trip Generation Manual", 10th Edition, 2017.

[2] Trips are one-way traffic movements, entering or leaving.

- [3] Affordable housing (family) trip generation average rates based on vehicle trip count data collected at affordable housing sites in the City of Los Angeles in 2016 as provided in the *Transportation Impact Study Guidelines*, December 2016.
  - Daily Trip Rate: 4.08 trips/dwelling unit; 50% inbound/50% outbound
  - AM Peak Hour Trip Rate: 0.50 trips/dwelling unit; 40% inbound/60% outbound
  - PM Peak Hour Trip Rate: 0.34 trips/dwelling unit; 55% inbound/45% outbound
- [4] A transit adjustment of 15 percent was applied to all the land use components due to the proximity to the Metro Gold Line Soto station located at 2330 E. 1st Street. The transit adjustments were applied after the pass-by adjustments were applied.
- [5] ITE Land Use Code 495 (Recreational Community Room) trip generation average rates.
  - Daily Trip Rate: 28.82 trips/1,000 SF of floor area; 50% inbound/50% outbound
  - AM Peak Hour Trip Rate: 1.76 trips/1,000 SF of floor area; 66% inbound/34% outbound
  - PM Peak Hour Trip Rate: 2.31 trips/1,000 SF of floor area; 47% inbound/53% outbound

[6] ITE Land Use Code 820 (Shopping Center) trip generation average rates.

- Daily Trip Rate: 37.75 trips/1,000 SF of leasable floor area; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.94 trips/1,000 SF of leasable floor area; 62% inbound/38% outbound

- PM Peak Hour Trip Rate: 3.81 trips/1,000 SF of leasable floor area; 48% inbound/52% outbound

- [7] Pass-by trips are made as intermediate stops on the way from an origin to a primary destination without a route diversion. Pass-by trips are attracted from the traffic passing the site on an adjacent street or roadway that offers direct access to the site. The pass-by adjustment factors of 50 percent and 20 percent were applied to the retail and restaurant land use components, respectively, pursuant to the *Transportation Impact Study Guidelines*, December 2016.
- [8] ITE Land Use Code 932 (High-Turnover [Sit-Down] Restaurant) trip generation average rates.
  - Daily Trip Rate: 112.18 trips/1,000 SF of floor area; 50% inbound/50% outbound
  - AM Peak Hour Trip Rate: 9.94 trips/1,000 SF of floor area; 55% inbound/45% outbound
  - PM Peak Hour Trip Rate: 9.77 trips/1,000 SF of floor area; 62% inbound/38% outbound

#### 7.2 Project Traffic Distribution and Assignment

Project traffic volumes both entering and exiting the site have been distributed and assigned to the adjacent street system based on the following considerations:

- The site's proximity to major traffic corridors (i.e., Soto Street, Cesar Chavez Avenue, 1<sup>st</sup> Street, etc.).
- The location and spatial proximity of nearby commercial centers and similar type uses;
- Expected localized traffic flow patterns based on adjacent roadway channelization and presence of traffic signals;
- Existing intersection traffic volumes;
- Existing site parcel access ingress/egress schemes;
- Ingress/egress scheme planned for the proposed project;
- Nearby population and employment centers; and
- Input from LADOT staff.

The project traffic distribution percentages during weekday AM and PM peak hours at the study intersections are illustrated in *Figure 7-1*. The forecast project traffic volumes at the study intersections for the weekday AM and PM peak hours are displayed in *Figures 7-2* and *7-3*, respectively. The traffic volume assignments presented in *Figures 7-2* and *7-3* reflect the traffic distribution characteristics shown in *Figure 7-1* and the project traffic generation forecasts presented in *Table 7-1*. It should be noted that in accordance with the City of Los Angeles traffic study guidelines, no pass-by trip adjustments were applied to the intersections adjacent to the project site (i.e., Breed Street/1<sup>st</sup> Street and Soto Street/1<sup>st</sup> Street).





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### 8.0 TRAFFIC IMPACT ANALYSIS METHODOLOGY

The study intersections were evaluated using the Critical Movement Analysis (CMA) method of analysis which determines Volume-to-Capacity (v/c) ratios on a critical lane basis. The overall intersection v/c ratio is subsequently assigned a Level of Service (LOS) value to describe intersection operations. Level of Service varies from LOS A (free flow) to LOS F (jammed condition). A description of the CMA method and corresponding Level of Service is provided in *Appendix C*.

#### 8.1 Intersection Impact Criteria and Thresholds

The relative impact of the added project traffic volumes to be generated by the proposed project during the weekday AM and PM peak hours was evaluated based on analysis of existing and future operating conditions at the study intersections, without and with the proposed project. The previously discussed capacity analysis procedures were utilized to evaluate the future v/c relationships and service level characteristics at each study intersection.

The significance of the potential impacts of project generated traffic was identified using the traffic impact criteria set forth in LADOT's *Transportation Impact Study Guidelines*, December 2016. According to the City's published traffic study guidelines, the impact is considered significant if the project-related increase in the v/c ratio equals or exceeds the thresholds presented in *Table 8-1*.

	Table 8-1	
	CITY OF LOS ANGELES	3
INTER	SECTION IMPACT THRESHO	_D CRITERIA
Final v/c	Level of Service	Project Related Increase in v/c
> 0.700 - 0.800	С	equal to or greater than 0.040
> 0.800 - 0.900	D	equal to or greater than 0.020
>0.900	E or F	equal to or greater than 0.010

The City's Sliding Scale Method requires mitigation of project traffic impacts whenever traffic generated by the proposed development causes an increase of the analyzed intersection v/c ratio by an amount equal to or greater than the values shown above.

#### 8.2 Intersection Traffic Impact Analysis Scenarios

Traffic impacts at the study intersections were analyzed for the following conditions:

- [a] Existing conditions.
- [b] Existing with project conditions.
- [c] Condition [a] plus one percent (1.0%) annual ambient traffic growth through year 2021 and with completion and occupancy of the related projects (i.e., future without project conditions).
- [d] Condition [c] with completion and occupancy of the proposed project.
- [e] Condition [d] with implementation of project mitigation measures, where necessary.

The traffic volumes for each new condition were added to the volumes in the prior condition to determine the change in capacity utilization at the study intersections. It should be noted that Condition [b] above is a hypothetical scenario in that it calculates the traffic due to the occupancy of the proposed project in addition to the existing traffic volumes, but changes to existing volumes are expected to occur throughout the project's construction period due to other area projects and regional growth. However, this condition has been prepared to be consistent with the general rule under CEQA that the potential impacts of a development project are to be measured against existing conditions. Condition [d] above analyzes future conditions upon completion and full occupancy of the proposed project, which is expected to occur in 2021.

#### 9.0 TRAFFIC ANALYSIS

The traffic impact analysis prepared for the study intersections using the CMA methodology and application of the City of Los Angeles significant traffic impact criteria is summarized in *Table 9-1*. The CMA data worksheets for the analyzed intersections are contained in *Appendix C*.

#### 9.1 Existing Conditions

#### 9.1.1 Existing Conditions

As indicated in column [1] of *Table 9-1*, all of the five study intersections are presently operating at LOS C or better during the weekday AM and PM peak hours. The existing traffic volumes at the study intersections during the weekday AM and PM peak hours are displayed in *Figures 5-1* and *5-*2, respectively.

#### 9.1.2 Existing With Project Conditions

As shown in column [2] of *Table 9-1*, application of the City's threshold criteria to the "Existing With Project" scenario indicates that the proposed project is not expected to create significant impacts at any of the five study intersections. Incremental, but not significant, impacts are noted at the study intersections. Because there are no significant impacts, no traffic mitigation measures are required or recommended for the study intersections under the "Existing With Project" conditions. The existing with project traffic volumes at the study intersections during the weekday AM and PM peak hours are illustrated in *Figures 9-1* and *9-2*, respectively.

#### 9.2 Future Conditions

#### 9.2.1 Future Without Project Conditions

The future cumulative baseline conditions were forecast based on the addition of traffic generated by the completion and occupancy of related projects, as well as the growth in traffic due to the combined effects of continuing development, intensification of existing developments and other factors (i.e., ambient growth). The v/c ratios at all of the study intersections are incrementally increased with the addition of ambient traffic and traffic generated by the related projects listed in *Table 6-1*. As presented in column [3] of *Table 9-1*, four of the five study intersections are expected to continue operating at LOS D or better during the weekday AM and PM peak hours with the addition of growth in ambient traffic and related projects traffic under the future without project conditions. The following study intersection is expected to operate at LOS E during the peak hour as shown below with the addition of ambient growth traffic and traffic due to the related projects:

Int. No. 3: Soto Street/1<sup>st</sup> Street

PM Peak Hour: v/c=0.912, LOS E

The future without project (existing, ambient growth and related projects) traffic volumes at the study intersections during the weekday AM and PM peak hours are presented in *Figures 9-3* and *9-4*, respectively.

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Table 9-1 SUMMARY OF VOLUME TO CAPACITY RATIOS AND LEVELS OF SERVICE WEEKDAY AM AND PM PEAK HOURS

_						
	SIGNIF. IMPACT [a]	No No	No No	No No	No No	No No
[4]	CHANGE V/C [(4)-(3)]	0.008	0.003 0.002	0.013 0.005	0.003 0.000	0.007 0.004
	2021 WITH ECT LOS	рс	вU	ЕD	D D	вC
	YEAR ( FUTURE PROJE V/C	0.703 0.641	0.752 0.690	0.860 0.917	$0.841 \\ 0.850$	0.726 0.649
	2021 E W/O ECT LOS	B B	B	БD	D	B
[8]	YEAR FUTURI PROJI V/C	0.695 0.631	0.749 0.688	0.847 0.912	0.838 0.850	0.719 0.645
	SIGNIF. IMPACT [a]	No No	No No	No No	No No	No No
[2]	CHANGE V/C [(2)-(1)]	0.008 0.010	0.003 0.001	0.013 0.014	0.002 0.000	0.006 0.003
	2018 5 WITH 3CT LOS	A	B	00	в	B A
	YEAR EXISTING PROJE V/C	0.581 0.464	0.620 0.568	0.737 0.701	0.623 0.616	0.625 0.532
]	2018 JNG LOS	A A	B A	BC	BB	B A
[1]	YEAR EXIST V/C	0.573 0.454	0.617 0.567	0.724 0.687	0.621 0.616	0.619 0.529
	PEAK	AM PM	AM PM	AM PM	AM PM	AM PM
	INTERSECTION	Breed Street/ 1st Street	Soto Street/ Cesar E. Chavez Avenue	Soto Street/ 1st Street	Soto Street/ 4th Street	Mott Street/ 1st Street
	ŊŎ	1	5	ŝ	4	S.

According to LADOT's "Transportation Impact Study Guidelines," December 2016, a transportation impact on an intersection shall be deemed significant in accordance with the following table: [a]

Projec	equal	equal	equal
LOS	U	D	E/F
Final v/c	>0.701 - 0.800	>0.801 - 0.900	>0.901

t Related Increase in v/c

equal to or greater than 0.040 equal to or greater than 0.020 equal to or greater than 0.010

ΕH



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#### 9.2.2 Future With Project Conditions

As shown in column [4] of *Table 9-1*, application of the City's threshold criteria to the "With Proposed Project" scenario indicates that the proposed project is not expected to create significant impacts at the five study intersections. Incremental, but not significant, impacts are noted at the study intersections. Because there are no significant impacts, no traffic mitigation measures are required or recommended for the study intersections. The future with project (existing, ambient growth, related projects and project) traffic volumes at the study intersections during the weekday AM and PM peak hours are provided in *Figures 9-5* and *9-6*, respectively.

#### 9.3 Freeway Impact Analysis Screening Criteria Review

Pursuant to the "Freeway Impact Analysis Procedures" agreement executed in October 2013 and amended in December 2015 between LADOT and Caltrans District 7, traffic studies may be required to conduct a focused freeway impact analysis in addition to the CMP analysis. If projects meet any of the following criteria, applicants are directed to the Caltrans' Intergovernmental Review (IGR) section for a determination on the need for analysis and, if necessary, the methodology to be utilized for a freeway impact analysis:

- The project's peak hour trips would result in a 1% or more increase to the freeway mainline capacity of a freeway segment operating at LOS E or F (based on an assumed capacity of 2,000 vehicles per hour per lane); or
- The project's peak hour trips would result in a 2% or more increase to the freeway mainline capacity of a freeway segment operating at LOS D (based on an assumed capacity of 2,000 vehicles per hour per lane); or
- The project's peak hour trips would result in a 1% or more increase to the capacity of a freeway off-ramp operating at LOS E or F (based on an assumed ramp capacity of 850 vehicles per hour per lane); or
- The project's peak hour trips would result in a 2% or more increase to the capacity of a freeway off-ramp operating at LOS D (based on an assumed ramp capacity of 850 vehicles per hour per lane).

The traffic study MOU as contained in *Appendix A* was subsequently updated to include a review of the screening filter in order to determine if this project would be required to prepare a freeway analysis in accordance with the Caltrans freeway impact analysis requirements which are beyond the requirements established in the CMP. As presented in *Table 9-2*, based on the project trip generation and trip distribution to the highway system, the proposed project would not be subject to the Caltrans freeway impact analysis beyond the CMP requirements.

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#### Table 9-2 FREEWAY IMPACT ANALYSIS SCREENING [1] Weekday AM and PM Peak Hours

PROJECT TRIP	TO	FAL
GENERATION	PRO	JECT
	AM	PM
Inbound	22	23
Outbound	26	18

				TOTAL						FREEWAY
		PROJECT		PROJECT	Г «	NO.	TOTAL	TOTAL PERCE		ANALYSIS
EREPWANLOCATION	DID	TRIP	DICT		IPS	OF	CAPACITY	CAPA	CITY	REQUIRED?
FREEWAY LOCATION	DIR.	DIRECTION	DIST.	AM	PM	LANES	[2]	AM	PM	(YES/NO) [3]
Mannine Segment			1							
I-5 Freeway north of	NB	Outbound	5%	1	1	5	10.000	0.0%	0.0%	No
I-10 Freeway	SB	Inbound	5%	1	1	4	8.000	0.0%	0.0%	No
	~		- / -	-	_	-	.,	,.	,.	
US-101 Freeway north of	NB	Outbound	10%	3	2	4	8,000	0.0%	0.0%	No
Alameda Street	SB	Inbound	10%	2	2	4	8,000	0.0%	0.0%	No
I-10 Freeway west of	EB	Inbound	5%	1	1	5	10,000	0.0%	0.0%	No
Alameda Street	WB	Outbound	5%	1	1	5	10,000	0.0%	0.0%	No
L 10 En mart of	ED	Outbarrad	100/	2	2	C	12,000	0.00/	0.00/	N.
I-10 Freeway east of	EB W/D	Inhound	10%	3	2	6	12,000	0.0%	0.0%	No No
3010 311001	WD	moound	10%	2	2	0	12,000	0.0%	0.0%	110
SR-60 Freeway east of	EB	Outbound	5%	1	1	5	10,000	0.0%	0.0%	No
Lorena Street	WB	Inbound	5%	1	1	5	10,000	0.0%	0.0%	No
Off-Ramp										
on minp										
I-5 Freeway NB at	NB	Inbound	5%	1	1	2	1,700	0.1%	0.1%	No
4th Street										
I-5 Freeway SB at	SB	Inbound	5%	1	1	2	1 700	0.1%	0.1%	No
4th Street	55	moound	570	1	1	2	1,700	0.170	0.170	110
	~									
US-101 Freeway SB at	SB	Inbound	5%	1	1	2	1,700	0.1%	0.1%	No
4th Street										
I-10 Freeway EB at	EB	Inbound	5%	1	1	3	2,550	0.0%	0.0%	No
Soto Street										
I-10 Freeway WB at	WB	Inbound	10%	2	2	4	3,400	0.1%	0.1%	No
Soto Street	=			-	_		.,			

[1] Pursuant to the Transportation Impact Study Guidelines, City of Los Angeles Department of Transportation, December 2016, Agreement Between City of Los Angeles and Caltrans District 7 on Freeway Impact Analysis Procedures, October 2013, and per First Amendment to the Agreement between LADOT and Caltrans District 7 on Freeway Impact Analysis Procedures, December 15, 2015.

[2] Total Capacity derived from the assumed free-flow capacities shown below: (in vehicles per hour per lane)

Facility Type Capacity

2,000 vphpl

Mainline Segment

Off-Ramp 850 vphpl

[3] Freeway impact analysis is required if the project would result in an increase of ≥2% of capacity for facilities operating at LOS D, or in an increase

of ≥1% of capacity for facilities operating at LOS E/F. For a more conservative screening analysis, all facilities are assumed to be operating at LOS E/F.

#### 9.4 City of Los Angeles High Injury Network Review

Vision Zero is a citywide initiative which prioritizes the safety of pedestrians and bicyclists on public streets, with the understanding that roads which are safe for vulnerable users will be safer for all users, in an effort to eliminate traffic fatalities. Key elements of the policy, such as reducing traffic speeds, are founded on the principles of engineering, education, enforcement, evaluation, and equity. Originating in Sweden, the policy has been adopted in numerous other North American cities, including California cities such as San Francisco and San Diego.

Mayor Eric Garcetti issued Executive Directive No. 10 in August 2015, formally launching the Vision Zero initiative in Los Angeles. Vision Zero is also a stated safety objective in the Mobility Plan 2035, which sets the goal of zero traffic deaths by 2035. Jointly directed by the Department of Transportation and the Police Department, Vision Zero takes a multi-disciplinary approach to identifying safety risk factors and implementing solutions on a citywide scale. Using a methodology originally developed by the San Francisco Public Health Department, the Vision Zero Task Force has identified streets where investments in safety will have the most impact in reducing severe injuries and traffic fatalities in the City<sup>10</sup>. These roads are collectively known as the High Injury Network (HIN). The HIN will be reviewed for potential engineering re-design as well as educational and enforcement campaigns.

The proposed project is located at 113, 119, 121 South Soto Street and 2316, 2322, and 2400 East 1<sup>st</sup> Street in the Boyle Heights Community Plan area of the City of Los Angeles. The roadways in the study area of the proposed project which have been identified on the City's HIN are noted below:

- Soto Street, between Wabash Avenue and Olympic Boulevard,
- Cesar E. Chavez Avenue, between Boyle Avenue and Fresno Street,
- 1<sup>st</sup> Street, between Soto Street and Mott Street,
- 4<sup>th</sup> Street, between Gless Street and Soto Street.

If a proposed project results in significant traffic impacts at intersections located along a designated HIN, LADOT's Vision Zero group will review those specific locations and immediate vicinity for potential safety enhancements that are consistent with the City's Vision Zero initiative.

<sup>&</sup>lt;sup>10</sup> Vision Zero Los Angeles 2015-2025, August 2015.

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#### 10.0 CONGESTION MANAGEMENT PROGRAM TRAFFIC IMPACT ASSESSMENT

The Congestion Management Program (CMP) is a state-mandated program that was enacted by the California State Legislature with the passage of Proposition 111 in 1990. The program is intended to address the impact of local growth on the regional transportation system.

As required by the 2010 Congestion Management Program, a Traffic Impact Assessment (TIA) has been prepared to determine the potential impacts on designated monitoring locations on the CMP highway system. The analysis has been prepared in accordance with procedures outlined in the 2010 *Congestion Management Program*, Los Angeles County Metropolitan Transportation Authority, October 2010.

According to Section D.9.1 (Appendix D, page D-6) of the 2010 CMP manual, the criteria for determining a significant transportation impact is listed below:

"A significant transportation impact occurs when the proposed project increases traffic demand on a CMP facility by 2% of capacity (V/C  $\ge$  0.02), causing or worsening LOS F (V/C  $\ge$  1.00); if the facility is already at LOS F, a significant impact occurs when the proposed project increases traffic demand on a CMP facility by 2% of capacity (V/C  $\ge$  0.02)."

The CMP impact criteria apply for analysis of both intersection and freeway monitoring locations.

#### 10.1 Intersections

There are no CMP intersection monitoring locations in the vicinity of the proposed project. The CMP TIA guidelines require that intersection monitoring locations must be examined if the proposed project will add 50 or more trips during either the weekday AM or PM peak hours. The proposed project will not add 50 or more trips during either the weekday AM or PM peak hours (i.e., of adjacent street traffic) at CMP monitoring intersections, as stated in the CMP manual as the threshold criteria for a traffic impact assessment. Therefore, no further review of potential impacts to intersection monitoring locations that are part of the CMP highway system is required.

#### 10.2 Freeways

The following CMP freeway monitoring locations in the project vicinity have been identified:

•	CMP Station	Location
	Seg. No. 1004	I-5 Freeway at Stadium Way
	Seg. No. 1014	I-10 Freeway at East Los Angeles City Limit
	Seg. No. 1036	U.S. 101 Freeway north of Vignes Street

The CMP TIA guidelines require that freeway monitoring locations must be examined if the proposed project will add 150 or more trips (in either direction) during either the weekday AM or PM peak hours. The proposed project will not add 150 or more trips (in either direction) during either the weekday AM or PM peak hours to CMP freeway monitoring locations which is the threshold for preparing a traffic impact assessment, as stated in the CMP manual. As summarized in *Table 7-1*, the proposed project is anticipated to generate at most 26 outbound vehicle trips during the weekday AM peak hour and 23 inbound vehicle trips during the weekday PM peak hour, which is well below the 150 trip threshold. Therefore, no further review of potential impacts to freeway monitoring locations that are part of the CMP highway system is required.

#### 10.3 Transit Impact Review

As required by the 2010 Congestion Management Program, a review has been made of the potential impacts of the project on transit service. As discussed in Subsection 4.4 herein, existing transit service is provided in the vicinity of the proposed Los Lirios Mixed-Use project.

The project trip generation, as shown in *Table 7-1*, was adjusted by values set forth in the CMP (i.e., person trips equal 1.4 times vehicle trips, and transit trips equal 3.5 percent of the total person trips) to estimate transit trip generation. Pursuant to LADOT approval, assuming 15 percent (15%) transit trips, the proposed project is forecast to generate demand for ten transit trips during the weekday AM peak hour and nine transit trips during the PM peak hour. Over a 24-hour period, the proposed project is forecast to generate demand for 104 daily transit trips. The calculations are as follows:

- Weekday AM Peak Hour =  $48 \times 1.4 \times 0.15 = 10$  Transit Trip
- Weekday PM Peak Hour =  $41 \times 1.4 \times 0.15 = 9$  Transit Trips
- Weekday Daily Trips =  $496 \times 1.4 \times 0.15 = 104$  Transit Trips

As shown in *Table 4-2*, ten bus/rail lines and routes are provided in close proximity to the project site. As outlined in *Table 4-2*, under the "No. of Buses/Trains During Peak Hour" column, these transit lines provide services for an average of (i.e., average of the directional number of buses/trains during the peak hours) roughly 81 and 86 buses/trains during the weekday AM and PM peak hours, respectively. Therefore, based on the above calculated weekday AM and PM peak hour trips, this would correspond to less than one additional transit rider per bus/train. It is anticipated that the existing transit service in the project area will adequately accommodate the increase of project-generated transit trips. Thus, given the number of project-generated transit trips per bus/train, no project impacts on existing or future transit services in the project area are expected to occur as a result of the proposed project.

#### 11.0 CONCLUSIONS

- **Project Description** The project applicant in partnership with the Los Angeles County Metropolitan Transportation Authority seeks to obtain entitlements to construct a mixed-use project with 66 affordable housing apartment units and up to 5,000 square feet of ground floor local community serving retail/restaurant uses for Site A. Site B will primarily consist of the restoration and rehabilitation of the historic Peabody Werden Duplex with landscaping enhancements. Construction of the proposed project is expected to commence in year 2020 with occupancy in the year 2021. Vehicular access will be provided via a single driveway located on the east side of the alleyway along the westerly property frontage, at the southwest corner of the project site
- *Study Scope* The following five (5) study intersections were selected for analysis in consultation with LADOT staff in order to determine potential impacts related to the proposed project:
  - 1. Breed Street/1<sup>st</sup> Street
  - 2. Soto Street/Cesar E. Chavez Avenue
  - 3. Soto Street/1<sup>st</sup> Street
  - 4. Soto Street/4<sup>th</sup> Street
  - 5. Mott Street/1<sup>st</sup> Street
- *Project Trip Generation* The proposed project is expected to generate an increase of 48 vehicle trips (22 inbound trips and 26 outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the proposed project is expected to generate an increase of 41 vehicle trips (23 inbound trips and 18 outbound trips). Over a 24-hour period, the proposed project is forecast to generate an increase of 496 daily trip ends during a typical weekday (248 inbound trips and 248 outbound trips).
- *Related Projects* The City of Los Angeles Departments of Transportation and Planning were consulted to obtain the list of development projects (related projects) in the area. A total of 31 related projects was identified and considered as part of the cumulative traffic analysis.
- **Traffic Impact Analysis** It is concluded that the proposed project is not expected to create a significant traffic impact at any of the five study intersections based on the City of Los Angeles thresholds of significance used for evaluating traffic impacts. Incremental, but not significant, impacts are noted at the study intersections with completion of the proposed project. Because there are no significant impacts, no direct traffic mitigation measures are required or recommended for the study locations.

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• *CMP Traffic Assessment* – The results of the Los Angeles CMP traffic assessment indicate that the proposed project will not adversely affect any CMP arterial monitoring intersections or freeway monitoring locations. Therefore, no improvements/mitigation measures are required.

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APPENDIX A

TRAFFIC STUDY MEMORANDUM OF UNDERSTANDING

#### I. PROJECT INFORMATION

Project Name:								
Project Address:								
Project Description:								
LADOT Project Case Number: _				Project S	iite Plan atta	ched? (Requi	red)	res □ No
II. TRIP GENERATION	l							
Geographic Distribution: N _		%	S	%	Ε	%	W	%
Illustration of Project trip distri	bution pe	ercentag	es at Study	, intersect	ions attache	d? (Required)	□ Yes	□ No
Trip Generation Adjustments	Exact amou	nt of credi	t subject to ap	proval by LAI	DOT)			
	Yes	No						
Transit Usage								
Transportation Demand Management								
Existing Active Land Use								
Previous Land Use								
Internal Trip								
Pass-By Trip								
Source of Trip Generation Rate	(s)?	ITE 9 <sup>th</sup> E	dition	Other:				
Trip generation table including afternoon peak hour volumes (	a descrip ins/outs/	otion of t /totals),	he propose proposed t	ed land us rip credits	es, ITE rates, 5, etc. attach	estimated ed? (Required,	morning ) □Yes	and DNo
	<u>IN</u>		<u>OUT</u>		TOTAL			
AM Trips								
Pivi TTIps								
III. STUDY AREA AND	ASSUN	ΛΡΤΙΟΙ	NS					
Project Buildout Year:			Aml	pient or Cl	MP Growth F	Rate:		_ % Per Yr.
Related Projects List, researche	d by the	consulta	ant and app	proved by	LADOT, atta	ched? (Requi	red) 🗆 ۱	′es □No
Subject to Freeway Impact Ana MOU; selecting "yes" implies that at leas	lysis, in a t one criter	ddition i	to CMP Ana (isfied)  □ Ye	alysis? (/ es □No	Freeway analysis	screening filte	r must be ir	ncluded in this
Map of Study Intersections atta	iched? (N	lay be subj	ect to LADOT	revision after	initial impact ar	nalysis) 🗆	]Yes □	No
Is this Project located on a stree	et within	the High	n Injury Ne	twork? [	⊐Yes □N	0		



#### IV. CONTACT INFORMATION

 CONSULTANT

 Name:
 Linscott, Law & Greenspan, Engineers

 Address:
 600 S. Lake Avenue, Suite 500, Pasadena, CA 91106

 Phone Number:
 626.796.2322

E-Mail: taing@llgengineers.com

DEVELOPEREast LA Community Corporation2917 E. 1st Street, Suite 101Los Angeles, CA 90033

Approved by:	China Taing Construction and Construction and Construction	7/3/18	× Tite Amt 7/3/18
	Consultant's Representative	Date	LADOT Representative Date

List of Study Intersections (refer to Figure 1-1)

- 1. Breed Street/1st Street
- 2. Soto Street/Cesar E. Chavez Avenue
- 3. Soto Street/1st Street
- 4. Soto Street/4th Street
- 5. Mott Street/1st Street

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## Table 8-1 PROJECT TRIP GENERATION [1]

		DAILY	AM	PEAK HO	OUR	PM	PEAK HO	OUR
		TRIP ENDS [2]	V	JLUMES	[2]	V	DLUMES	[2]
LAND USE	SIZE	VOLUMES	IN	OUT	TOTAL	IN	OUT	TOTAL
Proposed Uses								
Apartment [3]	66 DU	270	13	20	33	12	10	22
Less Transit Adjustment (15%) [4]		(41)	(2)	(3)	(5)	(2)	(2)	(4)
Community Room [5]	1,490 GSF	43	2	1	3	1	2	3
Less Transit Adjustment (15%) [4]		(6)	nom.	nom.	nom.	nom.	nom.	nom.
Retail [6]	2,500 GLSF	94	1	1	2	5	5	10
Less Pass-by Adjustment (50%) [7]		(47)	(1)	(1)	(2)	(3)	(3)	(6)
Less Transit Adjustment (15%) [4]		(7)	nom.	nom.	nom.	nom.	nom.	nom.
High-Turnover (Sit-Down) Restaurant [8]	2,500 GSF	280	14	11	25	15	9	24
Less Pass-by Adjustment (20%) [7]		(56)	(3)	(2)	(5)	(3)	(2)	(5)
Less Transit Adjustment (15%) [4]		(34)	(2)	(1)	(3)	(2)	(1)	(3)
NET TOTAL PROJECT TRIPS		496	22	26	48	23	18	41

[1] Source: ITE "Trip Generation Manual", 10th Edition, 2017.

- [2] Trips are one-way traffic movements, entering or leaving.
- [3] Affordable housing (family) trip generation average rates based on vehicle trip count data collected at affordable housing sites in the City of Los Angeles in 2016 as provided in the *Transportation Impact Study Guidelines*, December 2016.
  - Daily Trip Rate: 4.08 trips/dwelling unit; 50% inbound/50% outbound
  - AM Peak Hour Trip Rate: 0.50 trips/dwelling unit; 40% inbound/60% outbound
  - PM Peak Hour Trip Rate: 0.34 trips/dwelling unit; 55% inbound/45% outbound
- [4] A transit adjustment of 15 percent was applied to all the land use components due to the proximity to the Metro Gold Line Soto station located at 2330 E. 1st Street. The transit adjustments were applied after the pass-by adjustments were applied.
- [5] ITE Land Use Code 495 (Recreational Community Room) trip generation average rates.
  - Daily Trip Rate: 28.82 trips/1,000 SF of floor area; 50% inbound/50% outbound
  - AM Peak Hour Trip Rate: 1.76 trips/1,000 SF of floor area; 66% inbound/34% outbound
  - PM Peak Hour Trip Rate: 2.31 trips/1,000 SF of floor area; 47% inbound/53% outbound
- [6] ITE Land Use Code 820 (Shopping Center) trip generation average rates.
  - Daily Trip Rate: 37.75 trips/1,000 SF of leasable floor area; 50% inbound/50% outbound
  - AM Peak Hour Trip Rate: 0.94 trips/1,000 SF of leasable floor area; 62% inbound/38% outbound
  - PM Peak Hour Trip Rate: 3.81 trips/1,000 SF of leasable floor area; 48% inbound/52% outbound
- [7] Pass-by trips are made as intermediate stops on the way from an origin to a primary destination without a route diversion. Pass-by trips are attracted from the traffic passing the site on an adjacent street or roadway that offers direct access to the site. The pass-by adjustment factors of 50 percent and 20 percent were applied to the retail and restaurant land use components, respectively, pursuant to the *Transportation Impact Study Guidelines*, December 2016.
- [8] ITE Land Use Code 932 (High-Turnover [Sit-Down] Restaurant) trip generation average rates.
  - Daily Trip Rate: 112.18 trips/1,000 SF of floor area; 50% inbound/50% outbound
  - AM Peak Hour Trip Rate: 9.94 trips/1,000 SF of floor area; 55% inbound/45% outbound
  - PM Peak Hour Trip Rate: 9.77 trips/1,000 SF of floor area; 62% inbound/38% outbound



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Table-6-1 RELATED PROJECTS LIST AND TRIP GENERATION [1]

цур	DDOIECT		1 AND FISE DATA		PROJECT DATA	DAILY TDID ENDS [2]	AM	PEAK HOUF	~	Md	PEAK HOUR	
NO.	STATUS	ADDRESS/LOCATION	LAND-USE	SIZE	SOURCE	VOLUMES	NI	LUO	TOTAL	IN	OUT	TOTAL
-	Proposed	USC Health Science Campus 1510 N. San Pablo Street	Medical Office Research & Development	120,000 GSF 465,000 GSF	[1]	7,715	613	140	753	161	613	774
0	Proposed	Boyle Heights MU Specific Plan 2901 E. Olympic Boulevard	Apartment Retail Office Medical Office Daycare Center Library	4,400 DU 185,000 GLSF 125,000 GSF 25,000 GSF 15,000 GSF 15,000 GSF	Ξ	19,382	463	1,044	1,507	1,123	804	1,927
ω	Proposed	Santa Fe Freight Yard Redevelopment 950 East 3rd Street	Apartment Retail/Restaurant School	635 DU 30,062 GLSF 532 Students	[1]	6,372	162	177	339	245	213	458
4	Proposed	Lorena Plaza Mixed-Use 3401 E. 1st Street	Apartment Retail	49 DU 10,000 GLSF	[1]	458	9	18	24	25	17	42
ŝ	Proposed	Coca Cola Mixed-Use 963 E. 4th Street	Office Retail Restaurant	78,600 GSF 25,000 GLSF 20,000 GSF	[1]	2,512	106	22	128	113	138	251
9	Proposed	2051 E. 7th Street	Apartment Restaurant Retail	320 DU 5,000 GSF 15,000 GLSF	[1]	2,310	17	127	144	145	64	209
٢	Proposed	826 S. Mateo Street	Condominium Retail Restaurant	90 DU 11,000 GLSF 5,600 GSF	[1]	1,267	11	34	45	62	39	101
8	Proposed	555 S. Mateo Street	Retail	153,000 GLSF	[1]	4,300	S	30	35	220	205	425
6	Proposed	2030 E. 7th Street	Office Retail	243,583 GSF 40,000 GLSF	[1]	2,306	274	34	308	69	249	318
10	Proposed	540 S. Santa Fe Avenue	Office	89,825 GSF	[1]	726	06	12	102	17	81	98
11	Proposed	1030 N. Soto Street	Hotel	81 Rooms	[1]	662	25	18	43	25	23	48
12	Proposed	2407 E. 1st Street	Apartment Retail	81 DU 5,000 GLSF	[1]	450	2	18	20	23	14	36
13	Proposed	Metro Emergency Security Operations Center 410 N. Center Street	Office	110,000 GSF	[1]	1,165	87	0	87	0	79	79
14	Proposed	500 S. Mateo Street	Restaurant	12,882 GSF	[1]	1,052	48	41	68	50	31	81
15	Proposed	2130 E. Violet Street	Office Retail	94,000 GSF 7,500 GLSF	[1]	1,351	137	30	167	39	122	161
16	Proposed	929 E. 2nd Street	Retail Other	37,974 GLSF 71,078 GSF	[1]	2,153	68	12	80	105	96	201
17	Proposed	La Vernda Mixed-Use 2420 E. Cesar Chavez Avenue	Apartment Bank Health Club	77 DU 4,000 GSF 4,000 GSF	[1]	1,087	25	36	61	52	44	98
18	Proposed	520 S. Mateo Street CPC-2016-3853	Apartment Office	600 DU 30,000 GSF	[1]	4,995	157	220	377	274	223	497

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LINSCOTT, LAW & GREENSPAN, engineers

Table-6-1 (Continued) RELATED PROJECTS LIST AND TRIP GENERATION [1]

	TOTAL		1,138	195	75	20	157	57	460	157	249	200	135	281	424	9,352
PEAK HOUR OLUMES [2]	OUT		539	74	31	7	114	25	330	51	192	79	48	192	324	5,061
Μd	IN		599	121	44	13	43	32	130	106	57	121	87	89	100	4,291
	TOTAL		945	152	51	0	86	243	451	145	224	152	69	243	441	7,523
( PEAK HOUR OLUMES [2]	OUT		447	116	37	(1)	×	112	122	95	30	119	32	63	76	3,269
MA V	NI		498	36	14	1	06	131	329	50	194	33	37	180	365	4,254
DAILY TRIP ENDS [2]	VOLUMES		12.247	2,095	788	253	1,330	277	4,477	1,990	2,029	2,166	1,487	2,394	3,493	95,289
PROJECT DATA	SOURCE		Ξ	[1]	[1]	[1]	[1]	[1]	[1]	Ξ	[1]	[1]	[1]	[1]	[1]	
	SIZE	15,000 GLSF 15,000 GSF	1,030 DU 219,258 GSF 31,285 GSF 26,070 GSF 15,642 GSF 15,642 GSF 15,642 GSF 15,642 GSF 2,607 GSF 2,607 GSF	310 DU 11,375 GLSF 11,736 GSF	93 DU 14,248 GLSF 6,000 GSF	18,327 GSF	91,185 GSF 9,430 GLSF 6,550 GSF	625 Students	320 DU 224,292 GSF 46,670 GLSF	185 DU 27,280 GLSF	14,193 GSF 6,793 GSF 10,065 GSF	430 DU 8,742 GLSF	4 DU 3,541 GSF 6,171 GLSF	99 DU 11 DU 113,350 GSF 43,657 GLSF	255,500 GSF 4,970 GLSF 9,940 GSF	
LAND USE DATA	LAND-USE	Retail Restaurant	Apartment Office Supermarket High-Turnover Restaurant Dinking Place Retail Coffee Shop Bank	Apartment Retail Office	Apartment Retail Office	Restaurant	Office Retail Restaurant	Elementary School	Apartment Office Retail	Apartment Retail	Market Health Club Restaurant	Apartment Retail	Apartment Restaurant Retail	Apartment Affordable Housing Office Retail	Office Retail Restaurant	
PROJECT NAME/NUMBER	ADDRESS/LOCATION		2650 E. Olympic Boulevard	527 S. Colyton Street ENV-2016-3400-EIR	940 E. 4th Street ENV-2017-611-EAF	806 E. 3rd Street	640 S. Santa Fe Avenue	443 S. Soto Street	2143 E. Violet Street	676 S. Mateo Street	Soho House 1000 S. Santa Fe Avenue	220 N. Center Street 2017-CEN-46412	810 E. 3rd Street	2110 Bay Street 2016-CEN-44566	401 S. Hewitt Street COC-2017-469-GPA	
PROJECT	STATUS		Proposed	Proposed	Proposed	Proposed	Proposed	Proposed	Proposed	Proposed	Proposed	Proposed	Proposed	Proposed	Proposed	
MAP	NO.	18	61	20	21	22	23	24	25	26	27	28	29	30	31	TOTAL

LINSCOTT, LAW & GREENSPAN, engineers

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Sources: City of Los Angeles Department of Transportation (L.ADOT) and Department of City Planning (L.ADCP). The peak hour traffic volumes were forecast based on trip data provided by L.ADOT and by applying trip rates as provided in the TTB-Trip Generation Manual.<sup>9</sup> 01.5
 Trips are one-way traffic movements, entering or leaving.

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### Table 9-2 FREEWAY IMPACT ANALYSIS SCREENING [1] Weekday AM and PM Peak Hours

PROJECT TRIP	TO	FAL
GENERATION	PRO	JECT
	AM	PM
Inbound	22	23
Outbound	26	18

				TOTAL						FREEWAY
		PROJECT	1	PROJECT	ſ	NO.	TOTAL	PERCE	ENT OF	ANALYSIS
		TRIP	DIG	TR	IPS	OF	CAPACITY	CAPA	CITY	REQUIRED?
FREEWAY LOCATION	DIR.	DIRECTION	DIST.	AM	PM	LANES	[2]	AM	PM	(YES/NO) [3]
Mainline Segment	r		-	-						
I 5 Freeway north of	NB	Outbound	5%	1	1	5	10,000	0.0%	0.0%	No
I-10 Freeway	SB	Inbound	5%	1	1	4	8,000	0.0%	0.0%	No
1-10 Heeway	55	moound	570	1	1	-	0,000	0.070	0.070	110
				-	_					
US-101 Freeway north of	NB	Outbound	10%	3	2	4	8,000	0.0%	0.0%	No
Alameda Street	SB	Inbound	10%	2	2	4	8,000	0.0%	0.0%	No
I-10 Freeway west of	EB	Inbound	5%	1	1	5	10,000	0.0%	0.0%	No
Alameda Street	WB	Outbound	5%	1	1	5	10,000	0.0%	0.0%	No
I-10 Freeway east of	EB	Outbound	10%	3	2	6	12,000	0.0%	0.0%	No
Soto Street	WB	Inbound	10%	2	2	6	12,000	0.0%	0.0%	No
SR-60 Freeway east of	EB	Outbound	5%	1	1	5	10.000	0.0%	0.0%	No
Lorena Street	WB	Inbound	5%	1	1	5	10,000	0.0%	0.0%	No
Off-Ramp										
I-5 Freeway NB at	NB	Inbound	5%	1	1	2	1,700	0.1%	0.1%	No
4th Street			.,.	-	-	_	-,			
L 5 Errorwov CD of	сD	Inhound	50/	1	1	2	1 700	0.10/	0.10/	No
4th Street	30	Inbound	3%	1	1	2	1,700	0.1%	0.1%	INO
	CD	<b>T</b> 1 1	50/	1	1	2	1 700	0.10/	0.10/	N
US-101 Freeway SB at	SB	Inbound	5%	1	1	2	1,700	0.1%	0.1%	No
4th Sheet										
I-10 Freeway EB at	EB	Inbound	5%	1	1	3	2,550	0.0%	0.0%	No
Solo Street										
	İ									
I-10 Freeway WB at	WB	Inbound	10%	2	2	4	3,400	0.1%	0.1%	No
Soto Street										

[1]

Mainline Segment Off-Ramp

2,000 vphpl

850 vphpl

[3] Freeway impact analysis is required if the project would result in an increase of >2% of capacity for facilities operating at LOS D, or in an increase of ≥1% of capacity for facilities operating at LOS E/F. For a more conservative screening analysis, all facilities are assumed to be operating at LOS E/F.

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## **APPENDIX B**

## TRAFFIC COUNT DATA

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## Breed St & 1st St



## Soto St & Cesar/Chavez Ave





## Soto St & 4th St



## Mott St & 1st St



APPENDIX C

CMA AND LEVELS OF SERVICE EXPLANATION

CMA DATA WORKSHEETS: WEEKDAY AM AND PM PEAK HOURS

### CRITICAL MOVEMENT ANALYSIS (CMA) DESCRIPTION

Level of Service is a term used to describe prevailing conditions and their effect on traffic. Broadly interpreted, the Level of Service concept denotes any one of a number of differing combinations of operating conditions which may take place as a roadway is accommodating various traffic volumes. Level of Service is a qualitative measure of the effect of such factors as travel speed, travel time, interruptions, freedom to maneuver, safety, driving comfort and convenience.

Six Levels of Service, A through F, have been defined in the 1965 *Highway Capacity Manual*. Level of Service A describes a condition of free flow, with low traffic volumes and relatively high speeds, while Level of Service F describes forced traffic flow at low speeds with jammed conditions and queues which cannot clear during the green phases.

Critical Movement Analysis (CMA) is a procedure which provides a capacity and level of service geometry and traffic signal operation and results in a level of service determination for the intersection as a whole operating unit.

The per lane volume for each movement in the intersection is determined and the per lane intersection capacity based on the Transportation Research Board (TRB) Report 212 (*Interim Materials on Highway Capacity*). The resulting CMA represents the ratio of the intersection's cumulative volume over its respective capacity (V/C ratio). Critical Movement Analysis takes into account lane widths, bus and truck operations, pedestrian activity and parking activity, as well as number of lanes and geometrics.

The Level of Service (abbreviated from the *Highway Capacity Manual*) are listed here with their corresponding CMA and Load Factor equivalents. Load Factor is that proportion of the signal cycles during the peak hour which are fully loaded; i.e. when all of the vehicles waiting at the beginning of green are not able to clear on that green phase.

Critical Mov	vement Analysis Characte	ristics
Level of Service	Load Factor	Equivalent CMA
A (free flow)	0.0	0.00 - 0.60
B (rural design)	0.0 - 0.1	0.61 - 0.70
C (urban design)	0.1 - 0.3	0.71 - 0.80
D (maximum urban design)	0.3 - 0.7	0.81 - 0.90
E (capacity)	0.7 - 1.0	0.91 - 1.00
F (force flow)	Not Applicable	Not Applicable

### SERVICE LEVEL A

There are no loaded cycles and few are even close to loaded at this service level. No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication.

### SERVICE LEVEL B

This level represents stable operation where an occasional approach phase is fully utilized and a substantial number are approaching full use. Many drivers begin to feel restricted within platoons of vehicles.

## SERVICE LEVEL C

At this level stable operation continues. Loading is still intermittent but more frequent than at Level B. Occasionally drivers may have to wait through more one red signal indication and backups may develop behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so.

### SERVICE LEVEL D

This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak hour, but enough cycles with lower demand occur to permit periodic clearance of queues, thus preventing excessive backups. Drivers frequently have to wait through more than one red signal. This level is the lower limit of acceptable operation to most drivers.

### SERVICE LEVEL E

This represents near capacity and capacity operation. At capacity (CMA = 1.0) it represents the most vehicles that the particular intersection can accommodate. However, full utilization of every signal cycle is seldom attained no matter how great the demand. At this level all drivers wait through more than one red signal, and frequently through several.

### SERVICE LEVEL F

Jammed conditions. Traffic backed up from a downstream location on one of the street restricts or prevents movement of traffic through the intersection under consideration.





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7/9/2018-10:55 AM

CMA1

Significant impacted? NO

∆v/c after mitigation: 0.008 Fully mitigated? N/A

Sigr

Change in *v/c* due to project: 0.008

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:# S/I	North-	-South Street:	Breed S	Street			Year	of Count:	2018	Amb	oient Grow	vth (%):	1.0	Conduc	ted by: 1	-LG Engir	neers	Date:		7/5/2018	
+	Eas	t-West Street:	1st Stre	et			Project	ion Year:	2021		Peal	k Hour:	PM	Reviev	ved by:			Project: 1	-os Lirios M	ixed-Use PI	oject/1-18
ddO	osed Ø'in	No. of 1g: N/S-1, E/W-2 or I	Phases Both-3?			0 0			0 0				2 0				0 2				0 2
Right	Turns: F	-REE-1, NRTOR-2 o	r OLA-3?	NB 0 EB 0	SB WB	00	NB- EB-	0 SB 0 WB	00	28- 19-	00	SB WB-	0 0	NB-	00	SB WB	0 0	NB	00	SB- WB-	0 0
	AT	-SAC-1 or ATSAC+# Override C	ATCS-2? Capacity			00			0 0				0 0				0 0				0 0
				EXIST	NG CONDI	TION	EXIST	ING PLUS PI	ROJECT	FUTURE	E CONDITIC	N W/O PRC	DJECT	FUTUR	E CONDITIC	ON W/ PRO	JECT	FUTURE	W/ PROJE	CT W/ MITIC	<b>BATION</b>
		MOVEMENT		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
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					SUM:	831		SUM:	846			SUM:	1097			SUM:	1112			SUM:	1112
	VOLUN	ME/CAPACITY (V/C)	RATIO:			0.554			0.564				0.731			0	0.741				0.741
ž	LESS A1	TSAC/ATCS ADJUS	TMENT:			0.454			0.464				0.631				0.641				0.641
	_	LEVEL OF SERVICE	E (LOS):			A			A				ю				B				в
		REN	MARKS:																		
	Version	1: 1i Beta; 8/4/2011	-													PROJE	ECT IMP	ACT			

Version: 1i Beta; 8/4/2011

CMA1

Av/c after mitigation: 0.010 Fully mitigated? N/A

Change in v/c due to project: 0.010 Significant impacted? NO





	I/S #:	2	Oppo	Right					d	INN	юан	нтя	ON	ΔN		анл	LUO	s		аN	NOB	ITS/	/3	D		ата	MES	-		V/C		
	North-South Street:	East-West Street:	No. of osed Ø'ing: N/S-1, E/W-2 or	Turns: FREE-1, NRTOR-2 o	ATSAC-1 or ATSAC+/	Override (		MOVEMENT	Left	Left-Through	Through Through-Right	Right	Left-Through-R Left-Right	Left Left-Through	Through	Through-Right	кıgnt Left-Through-Ri	Left-Right	Left	Left-Through	Through Through-Right	Right	Left-Through-R Left-Right	Left Left-Through	Through	Through-Right	Left-Through-Ri Left-Through-Ri Left-Rinht	CRITICAL V	VOLUME/CAPACITY (V/C)	LESS ATSAC/ATCS ADJUS	LEVEL OF SERVIC	RE
Metric	Soto St	Cesar E	of Phases Both-3?	or OLA-3?	ATCS-2?	Capacity			-				light				ight	,					light				light	OLUMES	) RATIO:	STIMENT:	E (LOS):	MARKS:
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Matrix forwart Type:         1,0         Conducted by:         Lid Engineers         Date:         1,0           Feak Hour:         AM         Reviewed by:         Ss-         0         Ns-         0         10	Am			N N	8		FUTUF	Added Volume	88		213	£		4	143		-		0		4	61		0	g	ų	ი					
wull frag         I.0         Conducted Dy:         LG Engineers         Date:         All is many fragments         Project:         Last is many fragments         Date:         All is many fragments         All is many fragments         All is many fragments         Many fragments         Many fragments         All is many fragments		Pe		00	C		RE CONDIT!	Total Volume	167		765	20		88	886		127		2		277	165		თ	1112	Ĺ	8	Nor.				
MFevreweed by: Reviewed by:Londocted by: Reviewed by:LongoDate: Reviewed by:Date: Reviewed by:Date:	Wui (/0).	ak Hour:		SB- WB-	-9		ON W/O PR	No. of Lanes	-	0		0	0 0	- c		- c	00	0	0	-	0 -	00	0 0	0 -	0	c		th-South: ast-West:	2014			
Conducted by:       LIG Engineers       Date:       Date:       Date:       Date:       MB-       Date:       MB-       Date:       MB-       Date:       MB-       Date:       MB-       Date:       MB-       MB-       Date:       MB-       Date:       MB-       MB-       Date:       MB-       MAB-       MO-       MB-       MO-	1.0	AM	0 0	00	D (V	0	OJECT	Lane Volume	167		418	70		88	507		127		N		227	227		თ	598	001	0 200	674 600	1274 0 849	0.749	ပ	
ted by:     LG Engineers     Date:       ved by: $\mathbf{NB}$ -     0 $\mathbf{NB}$ -     0       0 $\mathbf{NB}$ -     0 $\mathbf{NB}$ -     0 $\mathbf{NB}$ -       10 $\mathbf{NB}$ -     0 $\mathbf{NB}$ -     0 $\mathbf{NB}$ -       10 $\mathbf{NB}$ -     0 $\mathbf{NB}$ -     0 $\mathbf{NB}$ -       10 $\mathbf{NB}$ -     0 $\mathbf{NB}$ -     0     10       170     1     170     0     170     170       170     1     170     0     170     170       170     1     170     0     170     170       127     0     127     0     127     10       127     0     127     0     127       167     0     127     0     127       167     0     228     0     228       167     0     228     0     167       167     0     127     0     127       167     0     228     0     167       167     0     228     0     167       167     0     127     0     1112       1112     0     138     0     167       1112     0	Conduc	Reviev		-87 -84	8		FUTURI	Added Volume	ი		4	0		0	ო	¢	D		0		0	0		0	0	c	C					
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7/9/2018-10:55 AM

CMA2

Av/c after mitigation: 0.003 Fully mitigated? N/A

Change in v/c due to project: 0.003 Significant impacted? NO





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Version: 1i Beta; 8/4/2011

Av/c after mitigation: 0.002 Fully mitigated? N/A CMA2

Change in v/c due to project: 0.002 Significant impacted? NO

2

7/9/2018-10:55 AM





NB-         0         SE-         0         SE-         0         NB-         201	Ambient Growth (%): 1.0 C Peak Hour: AM		N 0	<u>NB</u> 0 <u>SB</u> 0 <u>N</u>	N 0	FUTURE CONDITION W/O PROJECT	dded Total No. of Lane At Sume Volume Lanes Volume Vo	9 0 9 0	-	221 804 0 489 1 1	81 137 0 489	00	Þ	0 -	- 0	← C		1	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	34 346 I 346 0	1 136 0	0	58 212 1 212 0 0	61 849 1 <b>849</b>	3 47 1 47	F F	North-South: 526 East-West: 804	SUM: 1420	0.947	0.847	D
GIO Street         st Street         -2?       NB-       0       SB-       0         -2?       NB-       0       SB-       0       2         -2?       EB-       0       SB-       0       0         -2?       EB-       0       SB-       0       0         -2?       EB-       0       NB-       0       0         -2?       EXISTING CONDITION       Non-off       Lanes       Volume       1         -2.       54       0       0       0       0       0       0         54       1	Year of Count: 2018 Projection Year: 2021		0 7	NB 0 SB 0	7 O	EXISTING PLUS PROJECT	Project Total Lane / Traffic Volume Volume V	<b>9</b> 9 9		322	0 54 322								610 610	10 313 313 313			0 149 149	9 774 <b>774</b>	0 43 43	2	North-South: 435 East-West- 821	SUM: 1256	0.837	0.737	C
et Street st Street ses ses ses ses ses ses ses ses ses	eet	c	0 7	NB 0 SB 0	0	EXISTING CONDITION	No. of Lane Lane Volume	<b>9</b> 0 9	~	0 ←	54 0 322	00	5	0 -	- 0	C		40		303 - 303 0 0	0	0	149 1 149 0	765 1 <b>765</b>	43 1 43	- 0 0	North-South: 431 Fast-West: 805	SUM: 1236	0.824	0.724	C
h Street: Start 15 st Street: 15 S-1, EW-2 or Both 1, NRTOR-2 or OL 1 or ATSAC+ATCS Override Capa fr fr fr fr fr fr fr fr fr fr fr fr fr	h Street: Soto Street t Street: 1st Street	No of Phases	No. of Phases 3-1, E/W-2 or Both-3?	I. NRTOR-2 or OLA-3? NB	I OF A I SAC+A I CS-27 Override Capacity		EMENT	بو	ft-Through	rough rouah-Riaht	tht	ft-Through-Right *-Rich+	IL-KIGIN	ft *-Throuth	rough	rough-Right	ft-Through-Right t-Right		ft-Through	rough-Right	jht 't-Through-Right	ft-Right	ft *-Throuteh	hough	rough-Right	ft-Through-Right tt-Riaht	CRITICAL VOLUMES		PACITY (V/C) RATIO:	ATCS ADJUSTMENT:	- OF SERVICE (LOS):

7/9/2018-10:56 AM

CMA3

Change in *v/c* due to project: 0.013  $\Delta v/c$  after mitigation: 0.013 Significant impacted? NO Fully mitigated? NA

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I/S #:	North-	-South Street:	Soto Sti	reet			Year c	of Count:	2018	Amb	ient Grow	/th (%):	1.0	Conduc	ted by: L	.LG Engir	neers	Date:		/5/2018	
3	Eas	t-West Street:	1st Stre	iet			Projecti	on Year:	2021		Peal	k Hour:	PM	Review	/ed by:		L.	Project: L	os Lirios Mi	xed-Use Pr	oject/1-18
Oppc	osed Ø'in	No. of ng: N/S-1, E/W-2 or I	f Phases Both-3?			2 0			0 7				2 0				2 0				0
Right	Turns: F	REE-1. NRTOR-2 of	r OLA-3?	NB 0	SB-	0	NB	0 SB-	0	NB	0	SB-	0	NB	0	SB-	0	NB	0	SB-	0
)	AT	SAC-1 or ATSAC+A	ATCS-2?	EB 0	WB	0 N	<b>EB</b> -	0 WB	л с	-8-	D	WB-	n c	8	C	WB	0 C		O	WB	0 Q
		Override C	Capacity			0			0				0				0				0
				EXISTI	NG CONDIT	TION	EXISTI	NG PLUS PF	ROJECT	FUTURE	E CONDITIO	N W/O PRC	DJECT	FUTURE	E CONDITIC	N W/ PRO.	JECT	FUTURE	W/ PROJEC	T W/ MITIC	BATION
		MOVEMENT		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
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		CRITICAL VC	OLUMES	Ē	ast-West: SUM:	632 1181	Щ	ast-West: SUM:	640 1201		Ea	st-West: SUM:	816 1518		Eas	t-West: SUM:	824 1526		Ea	st-West: <mark>SUM:</mark>	824 1526
	VOLUN	<b>ME/CAPACITY (V/C)</b>	) RATIO:			0.787			0.801				1.012				1.017				1.017
Ň	LESS A1	TSAC/ATCS ADJUS	TMENT:			0.687			0.701				0.912			0	0.917				0.917
	-	LEVEL OF SERVICE	E (LOS):			B			ပ				ш				ш				ш
		REA	WARKS:																		
	Version	n: 1i Beta; 8/4/2011	-													PROJE	CT IMP	ACT			

Version: 1i Beta; 8/4/2011

CMA3

Av/c after mitigation: 0.005 Fully mitigated? N/A

Change in v/c due to project: 0.005 Significant impacted? NO

2





:# S/I	North-South Street:	Soto Str	reet					2018	Amt	oient Growt	:h (%):	1.0	Conduct	ted by:	LG Engin	leers	Date:	12	5/2018	
4	East-West Street:	4th Stre	et			Projectic	on Year:	2021		Peak	Hour:	AM	Review	/ed by:		•	roject:	os Lirios Mix	ed-Use Proj	ject/1-18
Opp	No. of sed Ø'ing: N/S-1, E/W-2 or	f Phases Both-3?			с м Ο			с υ	_			ς α				с м Ο				с о Э
Right	Turns: FREE-1, NRTOR-2 o	or OLA-3?					SB WB													
			EXISTING	CONDIT.	NO	EXISTIN	IG PLUS PR	OJECT	FUTUR	E CONDITION	W/O PRO	JECT	FUTURE		N W/ PROJ	JECT	FUTURE \	N/ PROJECI	r w/ mitig/	ATION
	MOVEMEN		Volume				Total Volume	Lane Volume												
D			103		103	2	105	105	103	209		209	2	211		211	0	211		211
			496		248	0	496	248	385	896		448	0	896		448	0	896		448
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CMA4

Significant impacted? NO

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CMA4

Change in v/c due to project: 0.000

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CMA5

Significant impacted? NO

Av/c after mitigation: 0.007 Fully mitigated? N/A





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Version: 1i Beta; 8/4/2011

CMA5

Av/c after mitigation: 0.004 Fully mitigated? N/A Change in v/c due to project: 0.004 Significant impacted? NO

2

7/9/2018-10:57 AM

Appendix D

Transportation Impact Study Addendum

## Memorandum

 To:
 Ms. Eileen Hunt
 Date:

 City of Los Angeles Dept. of Transportation
 Metro Development Review Unit

Ms. Eileen Hunt June 11, 2019 Page 2

the development on Site A. The development for Site A has been slightly modified to include 64 affordable housing units, a 1,650 square-foot community room, and roughly 4,300 square feet of ground floor commercial space. The revised project site (Site A only) and general vicinity are shown in *Figure 1*. An aerial photograph of the project site and vicinity is displayed in *Figure 2*. The revised project site plan is illustrated in *Figure 3*.

## Summary

The prior transportation impact study concluded that the Los Lirios Mixed-Use project was not expected to create a significant impact at any of the five study intersections. As mentioned previously, since the prior transportation impact analysis did not account for any program development contemplated for Site B and Site B is no longer part of the project site, no changes to the transportation impact analysis are required and the prior conclusions/findings remain valid.

Please feel free to call us at 626-796-2322 with any questions or comments regarding this addendum prepared for the proposed Los Lirios Mixed-Use project.

c: File



LOS LIRIOS MIXED-USE PROJE

GREENSPAN, engineers

FIGURE 2 AERIAL PHOTOGRAPH OF EXISTING PROJECT SITE

PRO





MAPES	ARCHITECTS	FIGURE 3
NOT TO SC		SITE PLAN
LINSCOTT, LAW & GREENSPAN, engineers	FOS	LIRIOS MIXED-USE PROJECT

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Appendix D DOT Letter

## **CITY OF LOS ANGELES**

## INTER-DEPARTMENTAL CORRESPONDENCE

119 S Soto St DOT Case No. CEN 18-46417

Date: October 2, 2018

To: Heather Bleemers, Senior City Planner Department of City Planning

From: Wes Pringle, Transportation Engineer Department of Transportation

Subject: TRANSPORTATION IMPACT ANALYSIS FOR THE PROPOSED LOS LIRIOS MIXED-USE PROJECT AT 113, 119, AND 121 SOUTH SOTO STREET AND 2316, 2322, AND 2400 EAST 1<sup>ST</sup> STREET (ENV-2018-3692-EAF)

The Department of Transportation (DOT) has reviewed the transportation analysis prepared by Linscott, Law & Greenspan, Engineers, dated July 30, 2018, for the proposed Los Lirios Mixed-Use project located on two sites: 113-121 South Soto Street and 2316-2400 East 1<sup>st</sup> Street. In order to evaluate the effects of the project's traffic on the available transportation infrastructure, the significance of the project's traffic impacts is measured in terms of change to the volume-tocapacity (V/C) ratio between the "future no project" and the "future with project" scenarios. This change in the V/C ratio is compared to established threshold standards to assess the project-related traffic impacts. Based on DOT's traffic impact criteria<sup>1</sup>, the transportation study included the analysis of five intersections and determined that none of the study intersections would be significantly impacted by project-related traffic. The results of the traffic analysis, which accounted for other known development projects in estimating potential cumulative impacts and adequately evaluated the project's transportation impacts on the surrounding community, are summarized in **Attachment 1**.

## **DISCUSSION AND FINDINGS**

## A. <u>Project Description</u>

The project, in partnership with the Los Angeles County Metropolitan Transportation Authority (Metro), proposes to construct the Los Lirios Mixed-Use project on two sites with affordable housing apartments and ground floor local community serving retail/restaurant land use components in Boyle Heights as illustrated in **Attachment 2a**. Site A south of the Metro Soto Station is currently vacant and will include 66 affordable housing units, a 1,490 square-foot community room, office space, computer/conference room, laundry room, and up to 5,000 square feet of retail/restaurant uses fronting Soto Street. Site B at 2316-2400 East 1<sup>st</sup> Street is currently occupied by the historic Peabody Werden Duplex and will primarily consist of the restoration and rehabilitation of the Peabody Werden Duplex. Additional uses of Site B have not yet been determined, and, as such, additional traffic analyses may be required. The subterranean parking on Site A will be accessed via the existing alleyway south of 1<sup>st</sup> Street on the southwest side of Site A as illustrated in

<sup>&</sup>lt;sup>1</sup> Per DOT's Traffic Study Policies and Procedures, a significant impact is identified as an increase in the Critical Movement Analysis (CMA) value, due to project related traffic, of 0.01 or more when the final ("with project") Level of Service (LOS) is LOS E or F; an increase of 0.020 or more when the final LOS is LOS D; or an increase of 0.040 or more when the final LOS is LOS C.

## Attachment 2b. The project is expected to be completed by 2021.

## B. <u>Trip Generation</u>

The project is estimated to generate an approximate net increase of 496 daily trips, a net increase of 48 trips during the a.m. peak hour and a net increase of 41 trips during the p.m. peak hour. The trip generation estimates are based on formulas published by the Institute of Transportation Engineers (ITE) <u>Trip Generation</u>, 10<sup>th</sup> Edition, 2017 and the LADOT Transportation Impact Study Guidelines, December 2016, Table 5: Trip Generation Rates for Affordable Housing Projects. A copy of the project trip generation table can be found in **Attachment 3**.

## C. <u>Freeway Analysis</u>

To comply with the Freeway Analysis Agreement executed between Caltrans and DOT in October 2013, a screening analysis is necessary to determine if additional evaluation of freeway mainline and ramp segments is necessary beyond the State-mandated Congestion Management Program (CMP) requirements. Exceeding one of the four screening criteria would require the applicant to work directly with Caltrans to prepare more detailed freeway analyses. However, the project does not meet or exceed any of the four thresholds defined in the agreement; therefore, no additional freeway analysis was required.

## D. <u>Construction Impacts</u>

DOT recommends that a construction work site traffic control plan be submitted to DOT's Citywide Temporary Traffic Control Section or Permit Plan Review Section for review and approval prior to the start of any construction work. Refer to <a href="http://ladot.lacity.org/what-we-do/plan-review">http://ladot.lacity.org/what-we-do/plan-review</a> to determine which section to coordinate review of the work site traffic control plan. The plan should show the location of any roadway or sidewalk closures, traffic detours, haul routes, hours of operation, protective devices, warning signs and access to abutting properties. DOT also recommends that all construction related truck traffic be restricted to off-peak hours to the extent feasible.

## **PROJECT REQUIREMENTS**

## A. <u>Highway Dedication and Street Widening Requirements</u>

On January 20, 2016, the City Council adopted the Mobility Plan 2035 which represents the new Mobility Element of the General Plan. A key feature of the updated plan is to revise street standards in an effort to provide a more enhanced balance between traffic flow and other important street functions including transit routes and stops, pedestrian environments, bicycle routes, building design and site access, etc. Per the new Mobility Element, **Soto Street and 1<sup>st</sup> Street**, both Avenue IIs, would require a 28-foot half-width roadway within a 43-foot half-width right-of-way, and the alley adjacent to Site A would require a 10-foot half-width right-of-way. The applicant should check with BOE's Land Development Group to determine if there are any other applicable highway dedication, street widening and/or sidewalk requirements for this project.

## B. <u>Parking Requirements</u>

The transportation analysis did not indicate the number of vehicle parking spaces the project will provide. The project will provide 70 long-term and 10 short-term bicycle parking spaces. The applicant should check with the Department of Building and Safety on the

number of Code-required parking spaces needed for the project.

C. Driveway Access and Circulation

The conceptual site plan for the project (see **Attachment 2b**) is acceptable to DOT. However, the review of this study does not constitute approval of the dimensions for any new proposed driveways. This requires separate review and approval and should be coordinated with DOT's Citywide Planning Coordination Section (201 North Figueroa Street, 5th Floor, Room 550, at 213-482-7024). In order to minimize and prevent last minute building design changes, the applicant should contact DOT for driveway width and internal circulation requirements prior to the commencement of building or parking layout design.

D. <u>Development Review Fees</u>

An ordinance adding Section 19.15 to the Los Angeles Municipal Code relative to application fees paid to DOT for permit issuance activities was adopted by the Los Angeles City Council in 2009 and updated in 2014. Ordinance No. 183270 identifies specific fees for traffic study review, condition clearance, and permit issuance. The applicant shall comply with any applicable fees per this ordinance.

If you have any questions, please contact Eileen Hunt of my staff at (213) 972-8481.

## Attachments

K:\Letters\2018\CEN18-46417\_119 Soto\_Los Lirios MU\_ltr.docx

c: Kevin Ocubillo, Council District No. 14 Mehrdad Moshksar, Central District Office, DOT Bert Moklebust, Central District, BOE Taimour Tanavoli, Case Management Office, DOT Chin S. Taing, Linscott, Law & Greenspan, Engineers

## Table 9-1 SUMMARY OF VOLUME TO CAPACITY RATIOS AND LEVELS OF SERVICE WEEKDAY AM AND PM PEAK HOURS

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	2	Soto Street/ Cesar E. Chavez Avenue	AM PM	0.617 0.567	B A	0.620 0.568	B A	0.003 0.001	No No	0.749 0.688	C B	0.752 0.690	C B	0.003 0.002	No No
1	3	Soto Street/ 1st Street	AM PM	0.724 0.687	C B	0.737 0.701	C C	0.013 0.014	No No	0.847 0.912	D E	0.860 0.917	D E	0.013 0.005	No No
43-	4	Soto Street/ 4th Street	AM PM	0.621 0.616	B No	0.623	В	0.002	No	0.838	D	0.841	D	0.003	No
a transportation impac	on an	intersection shall be deemed significant in a	ccordance	with											

Final v/c	LOS	Project Related Increase in v/c
>0.701 - 0.800	С	equal to or greater than 0.040
>0.801 - 0.900	D	equal to or greater than 0.020
>0.901	E/F	equal to or greater than 0.010

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ATTACHMENT 2a CEN18-<u>46417 119 S Soto St</u>



-6-
# ATTACHMENT 2b CEN18-4<u>6417 119 S Soto St</u>



-8-

# Table 7-1 PROJECT TRIP GENERATION [1]

		DAILY	AM	PEAK HO	OUR	PM PEAK HOUR				
		TRIP ENDS [2]	V	OLUMES	[2]	V	DLUMES	[2]		
LAND USE	SIZE	VOLUMES	IN	OUT	TOTAL	IN	OUT	TOTAL		
Proposed Uses										
Apartment [3]	66 DU	270	13	20	33	12	10	22		
Less Transit Adjustment (15%) [4]		(41)	(2)	(3)	(5)	(2)	(2)	(4)		
Community Room [5]	1,490 GSF	43	2	1	3	1	2	3		
Less Transit Adjustment (15%) [4]		(6)	nom.	nom.	nom.	nom.	nom.	nom.		
Retail [6]	2,500 GLSF	94	1	1	2	5	5	10		
Less Pass-by Adjustment (50%) [7]		(47)	(1)	(1)	(2)	(3)	(3)	(6)		
Less Transit Adjustment (15%) [4]		(7)	nom.	nom.	nom.	nom.	nom.	nom.		
High-Turnover (Sit-Down) Restaurant [8]	2,500 GSF	280	14	11	25	15	9	24		
Less Pass-by Adjustment (20%) [7]		(56)	(3)	(2)	(5)	(3)	(2)	(5)		
Less Transit Adjustment (15%) [4]		(34)	(2)	(1)	(3)	(2)	(1)	(3)		
NET TOTAL PROJECT TRIPS		496	22	26	48	23	18	41		

[1] Source: ITE "Trip Generation Manual", 10th Edition, 2017.

[2] Trips are one-way traffic movements, entering or leaving.

[3] Affordable housing (family) trip generation average rates based on vehicle trip count data collected at affordable housing sites in the City of Los Angeles in 2016 as provided in the *Transportation Impact Study Guidelines*, December 2016.

- Daily Trip Rate: 4.08 trips/dwelling unit; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.50 trips/dwelling unit; 40% inbound/60% outbound
- PM Peak Hour Trip Rate: 0.34 trips/dwelling unit; 55% inbound/45% outbound
- [4] A transit adjustment of 15 percent was applied to all the land use components due to the proximity to the Metro Gold Line Soto station located at 2330 E. 1st Street. The transit adjustments were applied after the pass-by adjustments were applied.
- [5] ITE Land Use Code 495 (Recreational Community Room) trip generation average rates.
  - Daily Trip Rate: 28.82 trips/1,000 SF of floor area; 50% inbound/50% outbound
  - AM Peak Hour Trip Rate: 1.76 trips/1,000 SF of floor area; 66% inbound/34% outbound
  - PM Peak Hour Trip Rate: 2.31 trips/1,000 SF of floor area; 47% inbound/53% outbound

[6] ITE Land Use Code 820 (Shopping Center) trip generation average rates.

- Daily Trip Rate: 37.75 trips/1,000 SF of leasable floor area; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.94 trips/1,000 SF of leasable floor area; 62% inbound/38% outbound

- PM Peak Hour Trip Rate: 3.81 trips/1,000 SF of leasable floor area; 48% inbound/52% outbound

- [7] Pass-by trips are made as intermediate stops on the way from an origin to a primary destination without a route diversion. Pass-by trips are attracted from the traffic passing the site on an adjacent street or roadway that offers direct access to the site. The pass-by adjustment factors of 50 percent and 20 percent were applied to the retail and restaurant land use components, respectively, pursuant to the *Transportation Impact Study Guidelines*, December 2016.
- [8] ITE Land Use Code 932 (High-Turnover [Sit-Down] Restaurant) trip generation average rates.
  - Daily Trip Rate: 112.18 trips/1,000 SF of floor area; 50% inbound/50% outbound
  - AM Peak Hour Trip Rate: 9.94 trips/1,000 SF of floor area; 55% inbound/45% outbound
  - PM Peak Hour Trip Rate: 9.77 trips/1,000 SF of floor area; 62% inbound/38% outbound

Appendix E

Greenhouse Gas Data

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## 119 S. Soto Avenue Project

Los Angeles-South Coast County, Annual

## **1.0 Project Characteristics**

#### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	66.00	Dwelling Unit	0.43	73,789.00	189
Regional Shopping Center	2.50	1000sqft	0.06	2,500.00	0
High Turnover (Sit Down Restaurant)	2.50	1000sqft	0.06	2,500.00	0
Enclosed Parking with Elevator	57.00	Space	0.51	22,800.00	0

#### **1.2 Other Project Characteristics**

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	12			Operational Year	2021
Utility Company	Los Angeles Department o	f Water & Power			
CO2 Intensity (Ib/MWhr)	1227.89	CH4 Intensity (Ib/MWhr)	0.029	N2O Intensity 0 (Ib/MWhr)	0.006

#### 1.3 User Entered Comments & Non-Default Data

CalEEMod Version: CalEEMod.2016.3.2

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Project Characteristics -

Land Use - Project Site is 1.06 ac.

Construction Phase - Estimated construction schedule.

Grading - Project Site is 1.06 ac.

Architectural Coating - Consistent with SCAQMD Rule 1113 assumed VOC content of 50 grams per liter for architectural coatings.

Vehicle Trips - Per traffic study.

Area Coating - Consistent with SCAQMD Rule 1113 assumed VOC content of 50 grams per liter for architectural coatings.

Construction Off-road Equipment Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation - Project compliance with the LA Green Building Code results in a 20% reduction in both indoor and outdoor water use.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstructionPhase	NumDays	10.00	44.00
tblConstructionPhase	NumDays	200.00	418.00
tblConstructionPhase	NumDays	4.00	22.00
tblConstructionPhase	PhaseEndDate	12/9/2020	9/7/2021
tblConstructionPhase	PhaseEndDate	11/11/2020	9/7/2021
tblConstructionPhase	PhaseEndDate	2/5/2020	1/30/2020
tblConstructionPhase	PhaseStartDate	11/26/2020	7/8/2021
tblConstructionPhase	PhaseStartDate	2/6/2020	1/31/2020

tblConstructionPhase	PhaseStartDate	1/31/2020	1/1/2020
tblGrading	AcresOfGrading	8.25	1.06
tblGrading	MaterialExported	0.00	12,908.00
tblLandUse	LandUseSquareFeet	66,000.00	73,789.00
tblLandUse	LotAcreage	1.74	0.43
tblVehicleTrips	ST_TR	6.39	4.03
tblVehicleTrips	ST_TR	158.37	76.00
tblVehicleTrips	ST_TR	49.97	16.00
tblVehicleTrips	SU_TR	5.86	4.03
tblVehicleTrips	SU_TR	131.84	76.00
tblVehicleTrips	SU_TR	25.24	16.00
tblVehicleTrips	WD_TR	6.65	4.03
tblVehicleTrips	WD_TR	127.15	76.00
tblVehicleTrips	WD_TR	42.70	16.00

#### 119 S. Soto Avenue Project - Los Angeles-South Coast County, Annual

2.0 Emissions Summary

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#### 2.1 Overall Construction

#### **Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year					ton	s/yr							MT	/yr		
2020	0.3039	2.3629	2.0437	4.6100e- 003	0.1525	0.1052	0.2576	0.0548	0.1012	0.1560	0.0000	402.6650	402.6650	0.0538	0.0000	404.0091
2021	0.4372	1.3711	1.4252	2.9000e- 003	0.0672	0.0637	0.1309	0.0180	0.0616	0.0795	0.0000	248.0592	248.0592	0.0325	0.0000	248.8704
Maximum	0.4372	2.3629	2.0437	4.6100e- 003	0.1525	0.1052	0.2576	0.0548	0.1012	0.1560	0.0000	402.6650	402.6650	0.0538	0.0000	404.0091

#### Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year					tor		MT/yr									
2020	0.3039	2.3629	2.0437	4.6100e- 003	0.1244	0.1052	0.2296	0.0397	0.1012	0.1409	0.0000	402.6647	402.6647	0.0538	0.0000	404.0088
2021	0.4372	1.3711	1.4252	2.9000e- 003	0.0672	0.0637	0.1309	0.0180	0.0616	0.0795	0.0000	248.0590	248.0590	0.0325	0.0000	248.8702
Maximum	0.4372	2.3629	2.0437	4.6100e- 003	0.1244	0.1052	0.2296	0.0397	0.1012	0.1409	0.0000	402.6647	402.6647	0.0538	0.0000	404.0088
	ROG	NOx	CO	SO2	Fugitive	Exhaust	PM10	Fugitive	Exhaust	PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
					FINITO	FINITO	Total	F WIZ.J	F WIZ.J	Total						
Percent Reduction	0.00	0.00	0.00	0.00	12.77	0.00	7.22	20.78	0.00	6.42	0.00	0.00	0.00	0.00	0.00	0.00

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2020	3-31-2020	0.8192	0.8192
2	4-1-2020	6-30-2020	0.6046	0.6046
3	7-1-2020	9-30-2020	0.6112	0.6112
4	10-1-2020	12-31-2020	0.6129	0.6129
5	1-1-2021	3-31-2021	0.5504	0.5504
6	4-1-2021	6-30-2021	0.5550	0.5550
7	7-1-2021	9-30-2021	0.7070	0.7070
		Highest	0.8192	0.8192

## 2.2 Overall Operational

#### Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr				МТ	/yr					
Area	0.5475	0.0250	1.1025	1.1100e- 003		0.0668	0.0668		0.0668	0.0668	7.0105	14.5850	21.5955	0.0220	4.8000e- 004	22.2870
Energy	7.0400e- 003	0.0619	0.0381	3.8000e- 004		4.8600e- 003	4.8600e- 003		4.8600e- 003	4.8600e- 003	0.0000	373.3516	373.3516	8.5100e- 003	2.7600e- 003	374.3871
Mobile	0.1459	0.7223	1.8141	6.0300e- 003	0.4761	5.2000e- 003	0.4813	0.1276	4.8600e- 003	0.1325	0.0000	556.1875	556.1875	0.0307	0.0000	556.9553
Waste	r,					0.0000	0.0000		0.0000	0.0000	12.7357	0.0000	12.7357	0.7527	0.0000	31.5520
Water	Francisco					0.0000	0.0000		0.0000	0.0000	1.6637	55.8089	57.4727	0.1722	4.3100e- 003	63.0613
Total	0.7005	0.8091	2.9547	7.5200e- 003	0.4761	0.0768	0.5529	0.1276	0.0765	0.2041	21.4099	999.9330	1,021.342 9	0.9861	7.5500e- 003	1,048.242 8

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#### 2.2 Overall Operational

### Mitigated Operational

	ROG	NOx	( (	00	SO2	Fugit PM	tive 10	Exhaust PM10	PM10 Total	Fugit PM2	tive E 2.5	Exhaust PM2.5	PM2.5 Total	Bi	o- CO2	NBio- CO2	Total	CO2	CH4	N2	0	CO2e
Category							tons	/yr										MT/y	/r			
Area	0.3328	0.020	)2 0.6	6882	1.1000e- 004			4.7600e- 003	4.7600e- 003		4	1.7600e- 003	4.7600e 003	- <b>C</b>	).0000	15.3775	15.3	3775	1.3500e- 003	2.600 00	)0e- 4	15.4893
Energy	7.0400e- 003	0.061	9 0.(	0381	3.8000e- 004	   		4.8600e- 003	4.8600e- 003		4	1.8600e- 003	4.8600e 003	- <b>-</b> C	0.0000	369.4493	369.	4493	8.4200e- 003	2.740 00	)0e- 3	370.4768
Mobile	0.1459	0.722	23 1.8	8141	6.0300e- 003	0.47	761	5.2000e- 003	0.4813	0.12	276 4	1.8600e- 003	0.1325	C	0.0000	556.1875	556.	1875	0.0307	0.00	000	556.9553
Waste	n 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					 ! !		0.0000	0.0000			0.0000	0.0000	1:	2.7357	0.0000	12.7	'357	0.7527	0.00	000	31.5520
Water	r,				,	 : :		0.0000	0.0000			0.0000	0.0000	1	.3310	44.6472	45.9	9781	0.1378	3.450 00	)0e- 3	50.4491
Total	0.4857	0.804	3 2.5	5404	6.5200e- 003	0.47	761	0.0148	0.4909	0.12	276	0.0145	0.1421	14	4.0666	985.6614	999.	7280	0.9309	6.450 00	00e- 3	1,024.922 5
	ROG		NOx	C	;o (	602	Fugiti PM1	ive Exh 10 PN	aust P //10 T	M10 otal	Fugitiv PM2.	/e Exh 5 PN	aust P 12.5	M2.5 Fotal	Bio- (	CO2 NBio	-CO2	Total C	O2 C	H4	N20	CO2e
Percent Reduction	30.66		0.59	14	.02 1	3.30	0.0	0 80	.71 1	1.22	0.00	81	.07 :	30.38	34.3	30 1.	43	2.12	5	.59	14.57	7 2.22

# 3.0 Construction Detail

#### **Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2020	1/30/2020	5	22	
2	Building Construction	Building Construction	1/31/2020	9/7/2021	5	418	
3	Architectural Coating	Architectural Coating	7/8/2021	9/7/2021	5	44	

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Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 1.06

Acres of Paving: 0.51

Residential Indoor: 149,423; Residential Outdoor: 49,808; Non-Residential Indoor: 7,500; Non-Residential Outdoor: 2,500; Striped Parking Area: 1,368 (Architectural Coating – sqft)

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Building Construction	Welders	3	8.00	46	0.45

#### Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	3	8.00	0.00	1,614.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	59.00	12.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	12.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction** 

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Water Exposed Area

#### 3.2 Grading - 2020

## Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Fugitive Dust			1		0.0510	0.0000	0.0510	0.0275	0.0000	0.0275	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0149	0.1659	0.0710	1.5000e- 004		7.5300e- 003	7.5300e- 003		6.9300e- 003	6.9300e- 003	0.0000	13.6286	13.6286	4.4100e- 003	0.0000	13.7387
Total	0.0149	0.1659	0.0710	1.5000e- 004	0.0510	7.5300e- 003	0.0585	0.0275	6.9300e- 003	0.0344	0.0000	13.6286	13.6286	4.4100e- 003	0.0000	13.7387

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	7.1200e- 003	0.2397	0.0528	6.3000e- 004	0.0139	7.5000e- 004	0.0146	3.8100e- 003	7.1000e- 004	4.5200e- 003	0.0000	62.2021	62.2021	4.3300e- 003	0.0000	62.3104
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1000e- 004	3.3000e- 004	3.6200e- 003	1.0000e- 005	9.6000e- 004	1.0000e- 005	9.7000e- 004	2.6000e- 004	1.0000e- 005	2.6000e- 004	0.0000	0.8988	0.8988	3.0000e- 005	0.0000	0.8995
Total	7.5300e- 003	0.2400	0.0564	6.4000e- 004	0.0148	7.6000e- 004	0.0156	4.0700e- 003	7.2000e- 004	4.7800e- 003	0.0000	63.1009	63.1009	4.3600e- 003	0.0000	63.2099

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## 3.2 Grading - 2020

#### Mitigated Construction On-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Fugitive Dust					0.0229	0.0000	0.0229	0.0124	0.0000	0.0124	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0149	0.1659	0.0710	1.5000e- 004		7.5300e- 003	7.5300e- 003		6.9300e- 003	6.9300e- 003	0.0000	13.6285	13.6285	4.4100e- 003	0.0000	13.7387
Total	0.0149	0.1659	0.0710	1.5000e- 004	0.0229	7.5300e- 003	0.0305	0.0124	6.9300e- 003	0.0193	0.0000	13.6285	13.6285	4.4100e- 003	0.0000	13.7387

#### Mitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Hauling	7.1200e- 003	0.2397	0.0528	6.3000e- 004	0.0139	7.5000e- 004	0.0146	3.8100e- 003	7.1000e- 004	4.5200e- 003	0.0000	62.2021	62.2021	4.3300e- 003	0.0000	62.3104
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1000e- 004	3.3000e- 004	3.6200e- 003	1.0000e- 005	9.6000e- 004	1.0000e- 005	9.7000e- 004	2.6000e- 004	1.0000e- 005	2.6000e- 004	0.0000	0.8988	0.8988	3.0000e- 005	0.0000	0.8995
Total	7.5300e- 003	0.2400	0.0564	6.4000e- 004	0.0148	7.6000e- 004	0.0156	4.0700e- 003	7.2000e- 004	4.7800e- 003	0.0000	63.1009	63.1009	4.3600e- 003	0.0000	63.2099

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#### 3.3 Building Construction - 2020

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Off-Road	0.2437	1.7746	1.5826	2.6500e- 003		0.0955	0.0955		0.0923	0.0923	0.0000	217.8506	217.8506	0.0404	0.0000	218.8616
Total	0.2437	1.7746	1.5826	2.6500e- 003		0.0955	0.0955		0.0923	0.0923	0.0000	217.8506	217.8506	0.0404	0.0000	218.8616

#### Unmitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.2200e- 003	0.1561	0.0422	3.7000e- 004	9.0700e- 003	7.3000e- 004	9.8000e- 003	2.6200e- 003	6.9000e- 004	3.3100e- 003	0.0000	35.7734	35.7734	2.2700e- 003	0.0000	35.8302
Worker	0.0327	0.0264	0.2914	8.0000e- 004	0.0776	6.6000e- 004	0.0782	0.0206	6.1000e- 004	0.0212	0.0000	72.3116	72.3116	2.2800e- 003	0.0000	72.3686
Total	0.0379	0.1824	0.3337	1.1700e- 003	0.0867	1.3900e- 003	0.0880	0.0232	1.3000e- 003	0.0245	0.0000	108.0850	108.0850	4.5500e- 003	0.0000	108.1988

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#### 3.3 Building Construction - 2020

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Off-Road	0.2437	1.7746	1.5826	2.6500e- 003		0.0955	0.0955		0.0923	0.0923	0.0000	217.8503	217.8503	0.0404	0.0000	218.8613
Total	0.2437	1.7746	1.5826	2.6500e- 003		0.0955	0.0955		0.0923	0.0923	0.0000	217.8503	217.8503	0.0404	0.0000	218.8613

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.2200e- 003	0.1561	0.0422	3.7000e- 004	9.0700e- 003	7.3000e- 004	9.8000e- 003	2.6200e- 003	6.9000e- 004	3.3100e- 003	0.0000	35.7734	35.7734	2.2700e- 003	0.0000	35.8302
Worker	0.0327	0.0264	0.2914	8.0000e- 004	0.0776	6.6000e- 004	0.0782	0.0206	6.1000e- 004	0.0212	0.0000	72.3116	72.3116	2.2800e- 003	0.0000	72.3686
Total	0.0379	0.1824	0.3337	1.1700e- 003	0.0867	1.3900e- 003	0.0880	0.0232	1.3000e- 003	0.0245	0.0000	108.0850	108.0850	4.5500e- 003	0.0000	108.1988

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## 119 S. Soto Avenue Project - Los Angeles-South Coast County, Annual

#### 3.3 Building Construction - 2021

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Off-Road	0.1613	1.2136	1.1480	1.9600e- 003		0.0609	0.0609		0.0588	0.0588	0.0000	161.5774	161.5774	0.0289	0.0000	162.2985
Total	0.1613	1.2136	1.1480	1.9600e- 003		0.0609	0.0609		0.0588	0.0588	0.0000	161.5774	161.5774	0.0289	0.0000	162.2985

#### Unmitigated Construction Off-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.3200e- 003	0.1054	0.0286	2.7000e- 004	6.7300e- 003	2.1000e- 004	6.9400e- 003	1.9400e- 003	2.1000e- 004	2.1500e- 003	0.0000	26.3258	26.3258	1.6100e- 003	0.0000	26.3662
Worker	0.0226	0.0176	0.1986	5.7000e- 004	0.0575	4.7000e- 004	0.0580	0.0153	4.4000e- 004	0.0157	0.0000	51.9280	51.9280	1.5300e- 003	0.0000	51.9662
Total	0.0259	0.1230	0.2272	8.4000e- 004	0.0643	6.8000e- 004	0.0650	0.0172	6.5000e- 004	0.0179	0.0000	78.2539	78.2539	3.1400e- 003	0.0000	78.3324

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#### 3.3 Building Construction - 2021

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Off-Road	0.1613	1.2136	1.1480	1.9600e- 003		0.0609	0.0609		0.0588	0.0588	0.0000	161.5772	161.5772	0.0289	0.0000	162.2983
Total	0.1613	1.2136	1.1480	1.9600e- 003		0.0609	0.0609		0.0588	0.0588	0.0000	161.5772	161.5772	0.0289	0.0000	162.2983

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.3200e- 003	0.1054	0.0286	2.7000e- 004	6.7300e- 003	2.1000e- 004	6.9400e- 003	1.9400e- 003	2.1000e- 004	2.1500e- 003	0.0000	26.3258	26.3258	1.6100e- 003	0.0000	26.3662
Worker	0.0226	0.0176	0.1986	5.7000e- 004	0.0575	4.7000e- 004	0.0580	0.0153	4.4000e- 004	0.0157	0.0000	51.9280	51.9280	1.5300e- 003	0.0000	51.9662
Total	0.0259	0.1230	0.2272	8.4000e- 004	0.0643	6.8000e- 004	0.0650	0.0172	6.5000e- 004	0.0179	0.0000	78.2539	78.2539	3.1400e- 003	0.0000	78.3324

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#### 3.4 Architectural Coating - 2021

#### Unmitigated Construction On-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Archit. Coating	0.2440					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.8200e- 003	0.0336	0.0400	7.0000e- 005		2.0700e- 003	2.0700e- 003		2.0700e- 003	2.0700e- 003	0.0000	5.6172	5.6172	3.9000e- 004	0.0000	5.6268
Total	0.2489	0.0336	0.0400	7.0000e- 005		2.0700e- 003	2.0700e- 003		2.0700e- 003	2.0700e- 003	0.0000	5.6172	5.6172	3.9000e- 004	0.0000	5.6268

#### Unmitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1400e- 003	8.8000e- 004	9.9800e- 003	3.0000e- 005	2.8900e- 003	2.0000e- 005	2.9200e- 003	7.7000e- 004	2.0000e- 005	7.9000e- 004	0.0000	2.6107	2.6107	8.0000e- 005	0.0000	2.6127
Total	1.1400e- 003	8.8000e- 004	9.9800e- 003	3.0000e- 005	2.8900e- 003	2.0000e- 005	2.9200e- 003	7.7000e- 004	2.0000e- 005	7.9000e- 004	0.0000	2.6107	2.6107	8.0000e- 005	0.0000	2.6127

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#### 3.4 Architectural Coating - 2021

#### Mitigated Construction On-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Archit. Coating	0.2440					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.8200e- 003	0.0336	0.0400	7.0000e- 005		2.0700e- 003	2.0700e- 003		2.0700e- 003	2.0700e- 003	0.0000	5.6172	5.6172	3.9000e- 004	0.0000	5.6268
Total	0.2489	0.0336	0.0400	7.0000e- 005		2.0700e- 003	2.0700e- 003		2.0700e- 003	2.0700e- 003	0.0000	5.6172	5.6172	3.9000e- 004	0.0000	5.6268

#### Mitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1400e- 003	8.8000e- 004	9.9800e- 003	3.0000e- 005	2.8900e- 003	2.0000e- 005	2.9200e- 003	7.7000e- 004	2.0000e- 005	7.9000e- 004	0.0000	2.6107	2.6107	8.0000e- 005	0.0000	2.6127
Total	1.1400e- 003	8.8000e- 004	9.9800e- 003	3.0000e- 005	2.8900e- 003	2.0000e- 005	2.9200e- 003	7.7000e- 004	2.0000e- 005	7.9000e- 004	0.0000	2.6107	2.6107	8.0000e- 005	0.0000	2.6127

# 4.0 Operational Detail - Mobile

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#### 119 S. Soto Avenue Project - Los Angeles-South Coast County, Annual

#### 4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Mitigated	0.1459	0.7223	1.8141	6.0300e- 003	0.4761	5.2000e- 003	0.4813	0.1276	4.8600e- 003	0.1325	0.0000	556.1875	556.1875	0.0307	0.0000	556.9553
Unmitigated	0.1459	0.7223	1.8141	6.0300e- 003	0.4761	5.2000e- 003	0.4813	0.1276	4.8600e- 003	0.1325	0.0000	556.1875	556.1875	0.0307	0.0000	556.9553

#### 4.2 Trip Summary Information

	Aver	age Daily Trip Ra	ate	Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	265.98	265.98	265.98	908,894	908,894
Enclosed Parking with Elevator	0.00	0.00	0.00		
High Turnover (Sit Down Restaurant)	190.00	190.00	190.00	258,938	258,938
Regional Shopping Center	40.00	40.00	40.00	86,514	86,514
Total	495.98	495.98	495.98	1,254,346	1,254,346

4.3 Trip Type Information

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		Miles			Trip %			Trip Purpos	e %
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

#### 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891
Enclosed Parking with Elevator	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891
High Turnover (Sit Down Restaurant)	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891
Regional Shopping Center	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891

# 5.0 Energy Detail

Historical Energy Use: N

#### 5.1 Mitigation Measures Energy

Install Energy Efficient Appliances

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	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	ī/yr		
Electricity Mitigated		, , ,	1 1 1		, , ,	0.0000	0.0000	1	0.0000	0.0000	0.0000	299.7796	299.7796	7.0800e- 003	1.4600e- 003	300.3932
Electricity Unmitigated	n — — — — — — — — — — — — — — — — — — —					0.0000	0.0000		0.0000	0.0000	0.0000	303.6819	303.6819	7.1700e- 003	1.4800e- 003	304.3034
NaturalGas Mitigated	7.0400e- 003	0.0619	0.0381	3.8000e- 004		4.8600e- 003	4.8600e- 003		4.8600e- 003	4.8600e- 003	0.0000	69.6697	69.6697	1.3400e- 003	1.2800e- 003	70.0837
NaturalGas Unmitigated	7.0400e- 003	0.0619	0.0381	3.8000e- 004		4.8600e- 003	4.8600e- 003		4.8600e- 003	4.8600e- 003	0.0000	69.6697	69.6697	1.3400e- 003	1.2800e- 003	70.0837

## 5.2 Energy by Land Use - NaturalGas

<u>Unmitigated</u>

	NaturalGa s Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr					ton	s/yr							MT	/yr		
Apartments Mid Rise	724560	3.9100e- 003	0.0334	0.0142	2.1000e- 004		2.7000e- 003	2.7000e- 003		2.7000e- 003	2.7000e- 003	0.0000	38.6653	38.6653	7.4000e- 004	7.1000e- 004	38.8950
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	576900	3.1100e- 003	0.0283	0.0238	1.7000e- 004		2.1500e- 003	2.1500e- 003		2.1500e- 003	2.1500e- 003	0.0000	30.7856	30.7856	5.9000e- 004	5.6000e- 004	30.9685
Regional Shopping Center	4100	2.0000e- 005	2.0000e- 004	1.7000e- 004	0.0000		2.0000e- 005	2.0000e- 005		2.0000e- 005	2.0000e- 005	0.0000	0.2188	0.2188	0.0000	0.0000	0.2201
Total		7.0400e- 003	0.0619	0.0381	3.8000e- 004		4.8700e- 003	4.8700e- 003		4.8700e- 003	4.8700e- 003	0.0000	69.6696	69.6696	1.3300e- 003	1.2700e- 003	70.0837

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#### 5.2 Energy by Land Use - NaturalGas

#### Mitigated

	NaturalGa s Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr					ton	s/yr							MT	ī/yr		
Apartments Mid Rise	724560	3.9100e- 003	0.0334	0.0142	2.1000e- 004		2.7000e- 003	2.7000e- 003		2.7000e- 003	2.7000e- 003	0.0000	38.6653	38.6653	7.4000e- 004	7.1000e- 004	38.8950
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	576900	3.1100e- 003	0.0283	0.0238	1.7000e- 004		2.1500e- 003	2.1500e- 003		2.1500e- 003	2.1500e- 003	0.0000	30.7856	30.7856	5.9000e- 004	5.6000e- 004	30.9685
Regional Shopping Center	4100	2.0000e- 005	2.0000e- 004	1.7000e- 004	0.0000		2.0000e- 005	2.0000e- 005		2.0000e- 005	2.0000e- 005	0.0000	0.2188	0.2188	0.0000	0.0000	0.2201
Total		7.0400e- 003	0.0619	0.0381	3.8000e- 004		4.8700e- 003	4.8700e- 003		4.8700e- 003	4.8700e- 003	0.0000	69.6696	69.6696	1.3300e- 003	1.2700e- 003	70.0837

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### 5.3 Energy by Land Use - Electricity

## <u>Unmitigated</u>

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr		МТ	7/yr	
Apartments Mid Rise	267540	149.0093	3.5200e- 003	7.3000e- 004	149.3142
Enclosed Parking with Elevator	133608	74.4145	1.7600e- 003	3.6000e- 004	74.5668
High Turnover (Sit Down Restaurant)	110350	61.4607	1.4500e- 003	3.0000e- 004	61.5865
Regional Shopping Center	33750	18.7975	4.4000e- 004	9.0000e- 005	18.8359
Total		303.6819	7.1700e- 003	1.4800e- 003	304.3034

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## 5.3 Energy by Land Use - Electricity

#### Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr		ΜT	7/yr	
Apartments Mid Rise	260533	145.1069	3.4300e- 003	7.1000e- 004	145.4039
Enclosed Parking with Elevator	133608	74.4145	1.7600e- 003	3.6000e- 004	74.5668
High Turnover (Sit Down Restaurant)	110350	61.4607	1.4500e- 003	3.0000e- 004	61.5865
Regional Shopping Center	33750	18.7975	4.4000e- 004	9.0000e- 005	18.8359
Total		299.7796	7.0800e- 003	1.4600e- 003	300.3931

# 6.0 Area Detail

#### 6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior Use Low VOC Paint - Residential Exterior Use Low VOC Paint - Non-Residential Interior Use Low VOC Paint - Non-Residential Exterior Use only Natural Gas Hearths Page 22 of 28

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	⊺/yr		
Mitigated	0.3328	0.0202	0.6882	1.1000e- 004		4.7600e- 003	4.7600e- 003		4.7600e- 003	4.7600e- 003	0.0000	15.3775	15.3775	1.3500e- 003	2.6000e- 004	15.4893
Unmitigated	0.5475	0.0250	1.1025	1.1100e- 003		0.0668	0.0668		0.0668	0.0668	7.0105	14.5850	21.5955	0.0220	4.8000e- 004	22.2870

## 6.2 Area by SubCategory

#### <u>Unmitigated</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory					ton	s/yr							МТ	/yr		
Architectural Coating	0.0244					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2862					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.2162	0.0171	0.4196	1.0700e- 003		0.0630	0.0630		0.0630	0.0630	7.0105	13.4717	20.4822	0.0209	4.8000e- 004	21.1466
Landscaping	0.0207	7.8800e- 003	0.6829	4.0000e- 005		3.7600e- 003	3.7600e- 003		3.7600e- 003	3.7600e- 003	0.0000	1.1133	1.1133	1.0800e- 003	0.0000	1.1404
Total	0.5475	0.0250	1.1025	1.1100e- 003		0.0668	0.0668		0.0668	0.0668	7.0105	14.5850	21.5955	0.0220	4.8000e- 004	22.2870

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#### 6.2 Area by SubCategory

#### Mitigated

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory					ton	s/yr							MT	ī/yr		
Architectural Coating	0.0244					0.0000	0.0000	1 1 1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2862					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.4400e- 003	0.0123	5.2400e- 003	8.0000e- 005		1.0000e- 003	1.0000e- 003		1.0000e- 003	1.0000e- 003	0.0000	14.2642	14.2642	2.7000e- 004	2.6000e- 004	14.3489
Landscaping	0.0207	7.8800e- 003	0.6829	4.0000e- 005		3.7600e- 003	3.7600e- 003		3.7600e- 003	3.7600e- 003	0.0000	1.1133	1.1133	1.0800e- 003	0.0000	1.1404
Total	0.3328	0.0202	0.6882	1.2000e- 004		4.7600e- 003	4.7600e- 003		4.7600e- 003	4.7600e- 003	0.0000	15.3775	15.3775	1.3500e- 003	2.6000e- 004	15.4893

# 7.0 Water Detail

#### 7.1 Mitigation Measures Water

Apply Water Conservation Strategy

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	Total CO2	CH4	N2O	CO2e
Category		MT	ſ/yr	
Mitigated	45.9781	0.1378	3.4500e- 003	50.4491
Unmitigated	57.4727	0.1722	4.3100e- 003	63.0613

# 7.2 Water by Land Use

<u>Unmitigated</u>

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal		MT	/yr	
Apartments Mid Rise	4.30017 / 2.71097	49.3250	0.1413	3.5400e- 003	53.9121
Enclosed Parking with Elevator	0/0	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	0.758834 / 0.0484362	6.0437	0.0249	6.1000e- 004	6.8477
Regional Shopping Center	0.185181/ 0.113498	2.1040	6.0800e- 003	1.5000e- 004	2.3015
Total		57.4727	0.1722	4.3000e- 003	63.0613

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#### 7.2 Water by Land Use

#### Mitigated

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal		МТ	/yr	
Apartments Mid Rise	3.44013 / 2.16878	39.4600	0.1130	2.8300e- 003	43.1297
Enclosed Parking with Elevator	0/0	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	0.607067/ 0.038749	4.8349	0.0199	4.9000e- 004	5.4782
Regional Shopping Center	0.148145/ 0.0907986	1.6832	4.8700e- 003	1.2000e- 004	1.8412
Total		45.9781	0.1378	3.4400e- 003	50.4491

#### 8.0 Waste Detail

8.1 Mitigation Measures Waste

CalEEMod Version: CalEEMod.2016.3.2

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# Category/Year

	Total CO2	CH4	N2O	CO2e				
	MT/yr							
Mitigated	12.7357	0.7527	0.0000	31.5520				
Unmitigated	12.7357	0.7527	0.0000	31.5520				

# 8.2 Waste by Land Use

<u>Unmitigated</u>

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons		МТ	/yr	
Apartments Mid Rise	30.36	6.1628	0.3642	0.0000	15.2681
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	29.75	6.0390	0.3569	0.0000	14.9613
Regional Shopping Center	2.63	0.5339	0.0316	0.0000	1.3226
Total		12.7357	0.7527	0.0000	31.5520

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#### 8.2 Waste by Land Use

#### Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons		МТ	/yr	
Apartments Mid Rise	30.36	6.1628	0.3642	0.0000	15.2681
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	29.75	6.0390	0.3569	0.0000	14.9613
Regional Shopping Center	2.63	0.5339	0.0316	0.0000	1.3226
Total		12.7357	0.7527	0.0000	31.5520

# 9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

## **10.0 Stationary Equipment**

#### Fire Pumps and Emergency Generators

	Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
--	----------------	--------	-----------	------------	-------------	-------------	-----------

#### **Boilers**

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

**User Defined Equipment** 

CalEEMod Version: CalEEMod.2016.3.2

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Equipment Type Number

11.0 Vegetation

Appendix F

**Geotechnical Investigation** 

# PRELIMINARY GEOTECHNICAL INVESTIGATION

# PROPOSED MIXED-USE DEVELOPMENT 119 & 121 SOUTH SOTO STREET AND 2316 – 2324 EAST 1<sup>ST</sup> STREET LOS ANGELES, CALIFORNIA TRACT: STEVENSON'S SUB. OF A PART LOT 6 BLOCK

60 HANCOCK SURVEY BLOCK: 2 LOTS: 8, 9, 12, 13 ARB: 1-2

PREPARED FOR

EAST LOS ANGELES COMMUNITY CORPORATION LOS ANGELES, CALIFORNIA

PROJECT NO. A9622-06-01

APRIL 16, 2018



GEOTECHNICAL ENVIRONMENTAL MATERIALS



Project No. A9622-06-01 April 16, 2018

Jacqueline Monterrosas East Los Angeles Community Corporation 2917 East 1<sup>st</sup> Street, Suite 101 Los Angeles, California 90033

Subject: PRELIMINARY GEOTECHNICAL INVESTIGATION PROPOSED MIXED-USE DEVELOPMENT 119 & 121 SOUTH SOTO STREET AND 2316 – 2324 EAST 1<sup>ST</sup> STREET LOS ANGELES, CALIFORNIA TRACT: STEVENSON'S SUB. OF A PART LOT 6 BLOCK 60 HANCOCK SURVEY; BLOCK: 2; LOTS: 8, 9, 12, 13; ARB: 1-2

Dear Ms. Monterrosas:

In accordance with your authorization of our proposal dated May 10, 2017, we have performed a geotechnical investigation for the proposed mixed-use development located at 119 and 121 South Soto Street and 2316 - 2324 East 1st Street in the City of Los Angeles, California. The accompanying report presents the findings of our study, and our conclusions and recommendations pertaining to the geotechnical aspects of proposed design and construction. Based on the results of our investigation, it is our opinion that the site can be developed as proposed, provided the recommendations of this report are followed and implemented during design and construction.

If you have any questions regarding this report, or if we may be of further service, please contact the undersigned.

Very truly yours,

#### GEOCON WEST, INC.



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FIELD INVESTIGATION Figures A1 through A3, Boring Logs

#### APPENDIX B

LABORATORY TESTING Figures B1 through B3, Direct Shear Test Results Figures B4 through B7, Consolidation Test Results Figure B8, Lab Test Results Figure B9, Corrosivity Test Results
## PRELIMINARY GEOTECHNICAL INVESTIGATION

# 1. PURPOSE AND SCOPE

This report presents the results of a preliminary geotechnical investigation for the proposed mixed-use development located at 119 & 121 South Soto Street and 2316 – 2324 East 1st Street in the City of Los Angeles, California (see Vicinity Map, Figure 1). The purpose of the investigation was to evaluate subsurface soil and geologic conditions at the site and, based on conditions encountered, to provide conclusions and recommendations pertaining to the geotechnical aspects of design and construction.

The scope of this investigation included a site reconnaissance, field exploration, laboratory testing, engineering analysis, and the preparation of this report. The site was explored on September 15, 2017 by excavating three 8-inch diameter borings to depths of approximately 30<sup>1</sup>/<sub>2</sub> to 40<sup>1</sup>/<sub>2</sub> feet below the existing ground surface utilizing a truck-mounted hollow-stem auger drilling machine. The approximate locations of the exploratory borings are depicted on the Site Plan (see Figure 2A). A detailed discussion of the field investigation, including boring logs, is presented in Appendix A.

Laboratory tests were performed on selected soil samples obtained during the investigation to determine pertinent physical and chemical soil properties. Appendix B presents a summary of the laboratory test results.

The recommendations presented herein are based on analysis of the data obtained during the investigation and our experience with similar soil and geologic conditions. References reviewed to prepare this report are provided in the *List of References* section.

If project details vary significantly from those described herein, Geocon should be contacted to determine the necessity for review and possible revision of this report.

# 2. SITE AND PROJECT DESCRIPTION

The subject site is located at 119 & 121 South Soto Street and 2316 - 2324 East 1st Street in the City of Los Angeles, California. The site is currently occupied by a vacant lot in the southern portion of the property and by a paved plaza for the Metro Transit Authority (MTA) Soto Station in the northern portion of the property. The site is bounded by single-story residential structures to the south, by an alley to the west, by South Soto Street to the east, and by East 1<sup>st</sup> Street to the north. The site is relatively level, with no pronounced highs or lows. Surface water drainage at the site appears to be by sheet flow along the existing ground contours to the city streets. Vegetation onsite consists of trees, which are located in isolated planter areas.

Based on the information provided by the Client, it is our understanding that the proposed development will consist of a 66-unit, five-story mixed-use structure to be constructed on the southern portion of the property. The proposed structure will be constructed over one subterranean parking level, which is anticipated to extend approximately 12 feet below the existing ground surface, including foundation depths. It is our further understanding that the northern portion of the property will be comprised of open space; no structures will be constructed in this area. The existing and proposed site conditions are shown on the Site Plan and Cross Sections (see Figures 2A and 2B).

It is our understanding that the MTA 1<sup>St</sup> and Soto Station is located along the northern portion of the subject property. Geotechnical reports and foundation designs will likely require MTA review and approval, and must be designed in a manner that will prevent or minimize potential building surcharges on the existing tunnel structures. Based on the plans provided to us, the setback of the proposed structure from the MTA station, and the depth of the proposed structure, the proposed structure is not anticipated to surcharge the existing MTA structures.

Based on the preliminary nature of the design at this time, wall and column loads were not available. It is anticipated that column loads for the proposed structures will be up to 600 kips, and wall loads will be up to 6 kips per linear foot.

Once the design phase and foundation loading configuration proceeds to a more finalized plan, the recommendations within this report should be reviewed and revised, if necessary. Any changes in the design, location or elevation of any structure, as outlined in this report, should be reviewed by this office. Geocon should be contacted to determine the necessity for review and possible revision of this report.

## 3. GEOLOGIC SETTING

The site is located on the Montebello Plain in the northern portion of the Los Angeles Basin. The Los Angeles Basin is a coastal plain bounded by the Santa Monica Mountains, Elsyian Hills and Repetto Hills to the north and northeast, the Puente Hills and Whittier faults to the east, the Palos Verdes Peninsula and Pacific Ocean to the west and south, and the Santa Ana Mountains and San Joaquin Hills to the south and southeast. Regionally, the site is located within the Peninsular Ranges Geomorphic Province. This province is characterized by northwest-trending physiographic and geologic features such as the Newport-Inglewood Fault Zone and the Whittier Fault Zone.

## 4. SOIL AND GEOLOGIC CONDITIONS

Based on our field investigation and published geologic maps of the area, the site is underlain by artificial fill and a thin veneer of Holocene age young alluvial fan deposits that are in turn underlain by Pleistocene age alluvial fan deposits. The alluvial fan deposits consist of varying amounts of unconsolidated gravel, sand and silt (California Geological Survey, 2012; Dibblee, 1989). Detailed stratigraphic profiles are provided on the boring logs in Appendix A.

## 4.1 Artificial Fill

Artificial fill was encountered in our field explorations to a maximum depth of 4.5 feet below existing ground surface. The artificial fill generally consists of brown to dark reddish brown sandy silt and silty sand with some fine gravel. The artificial fill is characterized as slightly moist and firm or medium dense. The fill is likely the result of past grading or construction activities at the site. Deeper fill may exist between excavations and in other portions of the site that were not directly explored.

# 4.2 Alluvium

Holocene and Pleistocene age alluvial fan deposits were encountered beneath the fill. The alluvium generally consists of brown, olive brown, yellowish brown, or reddish brown sandy silt, silt with sand, silty sand, sand with silt, and poorly graded sand with varying amounts of fine to coarse gravel. Clay was encountered in boring B2 at depths ranging from 19 to 24 feet beneath the existing ground surface. The alluvial soils are primarily fine- to medium-grained, slightly moist and medium dense to dense or firm to hard.

# 5. GROUNDWATER

A review of the Seismic Hazard Evaluation Report for the Los Angeles 7.5-Minute Quadrangle (California Division of Mines and Geology [CDMG], 1998) indicates that the historically highest groundwater level in the area is approximately 80 to 90 feet beneath the ground surface. Groundwater information presented in this document is generated from data collected in the early 1900's to the late 1990s. Based on current groundwater basin management practices, it is unlikely that groundwater levels will ever exceed the historic high levels.

Groundwater was not encountered in our borings, drilled to a maximum depth of 40½ feet below the existing ground surface. Based on the reported historic high groundwater levels in the site vicinity, the lack of groundwater in our borings, and the depth of proposed construction, groundwater is neither expected to be encountered during construction, nor have a detrimental effect on the project. However, it is not uncommon for groundwater levels to vary seasonally or for groundwater seepage conditions to develop where none previously existed, especially in impermeable fine-grained soils which are heavily irrigated or after seasonal rainfall. In addition, recent requirements for stormwater infiltration could result in shallower seepage conditions in the immediate site vicinity. Proper surface drainage of irrigation and precipitation will be critical for future performance of the project. Recommendations for drainage are provided in the Surface Drainage section of this report (see Section 7.24).

#### 6. GEOLOGIC HAZARDS

#### 6.1 Surface Fault Rupture

The numerous faults in Southern California include active, potentially active, and inactive faults. The criteria for these major groups are based on criteria developed by the California Geological Survey (CGS, formerly known as CDMG) for the Alquist-Priolo Earthquake Fault Zone Program (CGS, 2018a). By definition, an active fault is one that has had surface displacement within Holocene time (about the last 11,700 years). A potentially active fault has demonstrated surface displacement during Quaternary time (approximately the last 1.6 million years), but has had no known Holocene movement. Faults that have not moved in the last 1.6 million years are considered inactive.

The site is not within a state-designated Alquist-Priolo Earthquake Fault Zone (CGS, 2017; CGS, 2018b) or a city-designated Preliminary Fault Rupture Study Area (City of Los Angeles, 2018) for surface fault rupture hazards. No active or potentially active faults with the potential for surface fault rupture are known to pass directly beneath the site. Therefore, the potential for surface rupture due to faulting occurring beneath the site during the design life of the proposed development is considered low. However, the site is located in the seismically active Southern California region, and could be subjected to moderate to strong ground shaking in the event of an earthquake on one of the many active Southern California faults. The faults in the vicinity of the site are shown in Figure 3, Regional Fault Map.

The closest surface trace of an active fault to the site is the Raymond Fault located approximately 5.3 miles to the north (CGS, 2017). Other nearby active faults are the Hollywood Fault, the Eagle Rock Fault, the Verdugo Fault, the Newport-Inglewood Fault Zone, and the Whittier Fault located approximately 5.7 miles north, 6.8 miles northeast, 7.4 miles north-northeast, 8.6 miles southwest, and 9.3 miles east-southeast of the site, respectively (Ziony and Jones, 1989). The active San Andreas Fault Zone is located approximately 32 miles northeast of the site.

Several buried thrust faults, commonly referred to as blind thrusts, underlie the Los Angeles Basin at depth. These faults are not exposed at the ground surface and are typically identified at depths greater than 3.0 kilometers. The October 1, 1987  $M_w$  5.9 Whittier Narrows earthquake and the January 17, 1994  $M_w$  6.7 Northridge earthquake were a result of movement on the Puente Hills Blind Thrust and the Northridge Thrust, respectively. The Puente Hills Blind Thrust and the Elysian Park Thrust underlie the site at depth. These deep thrust faults and others in the Los Angeles area are not exposed at the surface and do not present a potential surface fault rupture hazard at the site; however, these deep thrust faults are considered active features capable of generating future earthquakes that could result in moderate to significant ground shaking at the site.

# 6.2 Seismicity

As with all of Southern California, the site has experienced historic earthquakes from various regional faults. The seismicity of the region surrounding the site was formulated based on research of an electronic database of earthquake data. The epicenters of recorded earthquakes with magnitudes equal to or greater than 5.0 in the site vicinity are depicted on Figure 4, Regional Seismicity Map. A partial list of moderate to major magnitude earthquakes that have occurred in the Southern California area within the last 100 years is included in the following table.

Earthquake (Oldest to Youngest)	Date of Earthquake	Magnitude	Distance to Epicenter (Miles)	Direction to Epicenter
San Jacinto-Hemet area	April 21, 1918	6.8	72	ESE
Near Redlands	July 23, 1923	6.3	55	Е
Long Beach	March 10, 1933	6.4	33	SSE
Tehachapi	July 21, 1952	7.5	80	NW
San Fernando	February 9, 1971	6.6	28	NNW
Whittier Narrows	October 1, 1987	5.9	8	Е
Sierra Madre	June 28, 1991	5.8	19	NE
Landers	June 28, 1992	7.3	102	Е
Big Bear	June 28, 1992	6.4	80	Е
Northridge	January 17, 1994	6.7	22	WNW
Hector Mine	October 16, 1999	7.1	117	ENE

# LIST OF HISTORIC EARTHQUAKES

The site could be subjected to strong ground shaking in the event of an earthquake. However, this hazard is common in Southern California and the effects of ground shaking can be mitigated if the proposed structures are designed and constructed in conformance with current building codes and engineering practices.

# 6.3 Seismic Design Criteria

The following table summarizes summarizes site-specific design criteria obtained from the 2016 California Building Code (CBC; Based on the 2015 International Building Code [IBC] and ASCE 7-10), Chapter 16 Structural Design, Section 1613 Earthquake Loads. The data was calculated using the computer program *U.S. Seismic Design Maps*, provided by the USGS. The short spectral response uses a period of 0.2 second. We evaluated the Site Class based on the discussion in Section 1613.3.2 of the 2016 CBC and Table 20.3-1 of ASCE 7-10. The values presented below are for the risk-targeted maximum considered earthquake (MCE<sub>R</sub>).

Parameter	Value	2016 CBC Reference
Site Class	D	Section 1613.3.2
MCE <sub>R</sub> Ground Motion Spectral Response Acceleration – Class B (short), S <sub>S</sub>	2.416g	Figure 1613.3.1(1)
$MCE_R$ Ground Motion Spectral Response Acceleration – Class B (1 sec), S <sub>1</sub>	0.842g	Figure 1613.3.1(2)
Site Coefficient, F <sub>A</sub>	1.0	Table 1613.3.3(1)
Site Coefficient, Fv	1.5	Table 1613.3.3(2)
Site Class Modified MCE <sub>R</sub> Spectral Response Acceleration (short), S <sub>MS</sub>	2.416g	Section 1613.3.3 (Eqn 16-37)
Site Class Modified $MCE_R$ Spectral Response Acceleration – (1 sec), $S_{M1}$	1.263g	Section 1613.3.3 (Eqn 16-38)
5% Damped Design Spectral Response Acceleration (short), S <sub>DS</sub>	1.611g	Section 1613.3.4 (Eqn 16-39)
5% Damped Design Spectral Response Acceleration (1 sec), S <sub>D1</sub>	0.842g	Section 1613.3.4 (Eqn 16-40)

# 2016 CBC SEISMIC DESIGN PARAMETERS

The table below presents the mapped maximum considered geometric mean (MCE<sub>G</sub>) seismic design parameters for projects located in Seismic Design Categories of D through F in accordance with ASCE 7-10.

Parameter	Value	ASCE 7-10 Reference	
Mapped MCE <sub>G</sub> Peak Ground Acceleration, PGA	0.914g	Figure 22-7	
Site Coefficient, FPGA	1.0	Table 11.8-1	
Site Class Modified MCE <sub>G</sub> Peak Ground Acceleration, PGA <sub>M</sub>	0.914g	Section 11.8.3 (Eqn 11.8-1)	

ASCE 7-10 PEAK GROUND ACCELERATION

The Maximum Considered Earthquake Ground Motion (MCE) is the level of ground motion that has a 2 percent chance of exceedance in 50 years, with a statistical return period of 2,475 years. According to the 2016 California Building Code and ASCE 7-10, the MCE is to be utilized for the evaluation of liquefaction, lateral spreading, seismic settlements, and it is our understanding that the intent of the Building code is to maintain "Life Safety" during a MCE event. The Design Earthquake Ground Motion (DE) is the level of ground motion that has a 10 percent chance of exceedance in 50 years, with a statistical return period of 475 years.

Deaggregation of the MCE peak ground acceleration was performed using the USGS online Unified Hazard Tool, 2008 Conterminous U.S. Dynamic edition. The result of the deaggregation analysis indicates that the predominant earthquake contributing to the MCE peak ground acceleration is characterized as a 6.64 magnitude event occurring at a hypocentral distance of 6.83 kilometers from the site.

Deaggregation was also performed for the Design Earthquake (DE) peak ground acceleration, and the result of the analysis indicates that the predominant earthquake contributing to the DE peak ground acceleration is characterized as a 6.64 magnitude occurring at a hypocentral distance of 11.08 kilometers from the site.

Conformance to the criteria in the above tables for seismic design does not constitute any kind of guarantee or assurance that significant structural damage or ground failure will not occur if a large earthquake occurs. The primary goal of seismic design is to protect life, not to avoid all damage, since such design may be economically prohibitive.

# 6.4 Liquefaction Potential

Liquefaction is a phenomenon in which loose, saturated, relatively cohesionless soil deposits lose shear strength during strong ground motions. Primary factors controlling liquefaction include intensity and duration of ground motion, gradation characteristics of the subsurface soils, in-situ stress conditions, and the depth to groundwater. Liquefaction is typified by a loss of shear strength in the liquefied layers due to rapid increases in pore water pressure generated by earthquake accelerations.

The current standard of practice, as outlined in the "Recommended Procedures for Implementation of DMG Special Publication 117, Guidelines for Analyzing and Mitigating Liquefaction in California" and "Special Publication 117A, Guidelines for Evaluating and Mitigating Seismic Hazards in California" requires liquefaction analysis to a depth of 50 feet below the lowest portion of the proposed structure. Liquefaction typically occurs in areas where the soils below the water table are composed of poorly consolidated, fine to medium-grained, primarily sandy soil. In addition to the requisite soil conditions, the ground acceleration and duration of the earthquake must also be of a sufficient level to induce liquefaction.

The State of California Seismic Hazard Zone Map for the Los Angeles Quadrangle (CDMG, 1999; CGS, 2017) indicates that the site is not located in an area designated as having a potential for liquefaction. In addition, a review of the County of Los Angeles Seismic Safety Element (Leighton, 1990) indicates that the site is not located within an area identified as having a potential for liquefaction. Based on these considerations, it is our opinion that the potential for liquefaction and associated ground deformations beneath the site is very low.

## 6.5 Slope Stability

The topography at the site and in the site vicinity slopes gently to the north. The site is located within a City of Los Angeles Hillside Grading Area but is not located within a City of Los Angeles Hillside Ordinance Area (City of Los Angeles, 2018). According to the County of Los Angeles Safety Element (Leighton, 1990), the site is not located within a "hillside area" or an area identified as having a potential for slope instability or landslides. Additionally, the site is not within zone of required investigation for earthquake-induced landslides (CDMG, 1999; CGS, 2017). There are no known landslides near the site, nor is the site in the path of any known or potential landslides. Therefore, the potential for landslides to adversely affect the site in the current condition is considered low.

# 6.6 Earthquake-Induced Flooding

Earthquake-induced flooding is inundation caused by failure of dams or other water-retaining structures due to earthquakes. Based on a review of the Los Angeles County Safety Element (Leighton, 1990) and the City of Los Angeles Safety Element (1996), the site is not located within a potential inundation area for an earthquake-induced dam failure. Therefore, the probability of earthquake-induced flooding is considered very low.

# 6.7 Tsunamis, Seiches, and Flooding

The site is not located within a coastal area. Therefore, tsunamis are not considered a significant hazard at the site.

Seiches are large waves generated in enclosed bodies of water in response to ground shaking. No major water-retaining structures are located immediately up gradient from the project site. Therefore, flooding resulting from a seismically-induced seiche is considered unlikely.

The site is within an area of minimal flooding (Zone X) as defined by the Federal Emergency Management Agency (FEMA, 2018: LACDPW, 2018b).

# 6.8 Oil Fields & Methane Potential

Based on a review of the California Division of Oil, Gas and Geothermal Resources (DOGGR) Well Finder website, the site is located with the Boyle Heights Oil Field (DOGGR, 2018). However, oil or gas wells are not located in the immediate site vicinity (DOGGR, 2018). Due to the voluntary nature of record reporting by the oil well drilling companies, wells may be improperly located or not shown on the location map. Undocumented wells could be encountered during construction. Any wells encountered will need to be properly abandoned in accordance with the current requirements of the DOGGR.

The site is located within the boundaries of a City of Los Angeles Methane Zone (City of Los Angeles, 2018). Therefore, a methane study is required for the proposed development. It is recommended that a qualified methane consultant be retained to perform the study and provide mitigation measures as necessary.

#### 6.9 Subsidence

Subsidence occurs when a large portion of land is displaced vertically, usually due to the withdrawal of groundwater, oil, or natural gas. Soils that are particularly subject to subsidence include those with high silt or clay content. The site is not located within an area of known ground subsidence. No large-scale extraction of groundwater, gas, oil, or geothermal energy is occurring or planned at the site or in the general site vicinity. There appears to be little or no potential for ground subsidence due to withdrawal of fluids or gases at the site.

#### 7. CONCLUSIONS AND RECOMMENDATIONS

#### 7.1 General

- 7.1.1 It is our opinion that neither soil nor geologic conditions were encountered during the investigation that would preclude the construction of the proposed development provided the recommendations presented herein are followed and implemented during design and construction.
- 7.1.2 Up to 3 feet of existing artificial fill was encountered during the site investigation. The existing fill encountered is believed to be the result of past grading and construction activities at the site. Deeper fill may exist in other areas of the site that were not directly explored. It is our opinion that the existing fill, in its present condition, is not suitable for direct support of proposed foundations or slabs. The existing fill and site soils are suitable for re-use as engineered fill provided the recommendations in the Grading section of this report are followed (see Section 7.4). Excavations for subterranean level are anticipated to penetrate through the existing artificial fill and expose competent alluvial soils throughout the excavation bottom.
- 7.1.3 Groundwater was not encountered during site exploration and the current groundwater table is sufficiently deep that it not expected to be encountered during construction. However, local seepage could be encountered during excavation of the subterranean levels, especially if conducted during the rainy season.
- 7.1.4 Based on these considerations, the proposed structure may be supported on conventional foundation system deriving support in the competent alluvium found at and below a depth of 10 feet. Foundations should be deepened as necessary to penetrate through soft or unsuitable alluvium at the direction of the Geotechnical Engineer. All foundation excavations must be observed and approved by the Geotechnical Engineer (a representative of Geocon), prior to placing steel or concrete. Recommendations for the design of a conventional foundation system are provided in Section 7.6.
- 7.1.5 Excavations on the order of 12 feet in vertical height are anticipated for construction of the subterranean levels, including foundation depths. Due to the depth of the excavation and the proximity to the property lines, city streets and adjacent offsite structures, excavation of the proposed subterranean level will likely require sloping and shoring measures in order to provide a stable excavation. Where shoring is required it is recommended that a soldier pile shoring system be utilized. In addition, where the proposed excavation will be deeper than and adjacent to an offsite structure, the proposed shoring should be designed to resist the surcharge imposed by the adjacent offsite structure. Recommendations for shoring are provided in Section 7.18 of this report.

- 7.1.6 Due to the nature of the proposed design and intent for a subterranean level, waterproofing of subterranean walls and slabs is suggested. Particular care should be taken in the design and installation of waterproofing to avoid moisture problems, or actual water seepage into the structure through any normal shrinkage cracks which may develop in the concrete walls, floor slab, foundations and/or construction joints. The design and inspection of the waterproofing is not the responsibility of the geotechnical engineer. A waterproofing consultant should be retained in order to recommend a product or method, which would provide protection to subterranean walls, floor slabs and foundations.
- 7.1.7 Foundations for small outlying structures, such as block walls up to 6 feet in height, planter walls or trash enclosures, which will not be tied to the proposed structure, may be supported on conventional foundations deriving support on a minimum of 12 inches of newly placed engineered fill which extends laterally at least 12 inches beyond the foundation area. Where excavation and compaction cannot be performed or is undesirable, foundations may derive support directly in the competent undisturbed alluvial soils, and should be deepened as necessary to maintain a minimum 12-inch embedment into the recommended bearing materials. If the soils exposed in the excavation bottom are soft or loose, compaction of the soils will be required prior to placing steel or concrete. Compaction of the foundation excavation bottom is typically accomplished with a compaction wheel or mechanical whacker and must be observed and approved by a Geocon representative.
- 7.1.8 Where new paving is to be placed, it is recommended that all existing fill and soft alluvial soils be excavated and properly compacted for paving support. The client should be aware that excavation and compaction of all existing fill and soft alluvial soils in the area of new paving is not required; however, paving constructed over existing uncertified fill or unsuitable alluvial soil may experience increased settlement and/or cracking, and may therefore have a shorter design life and increased maintenance costs. As a minimum, the upper 12 inches of subgrade soil should be scarified and properly compacted for paving support. Paving recommendations are provided in *Preliminary Pavement Recommendations* section of this report (see Section 7.11).
- 7.1.9 Based on the results of percolation testing performed at the site, a stormwater infiltration system is not considered feasible for this project. The results of the percolation testing are further discussed in the *Stormwater Infiltration* section of this report (see Section 7.23).
- 7.1.10 Once the design and foundation loading configuration for the proposed structure proceeds to a more finalized plan, the recommendations within this report should be reviewed and revised, if necessary. Based on the final foundation loading configurations, the potential for settlement should be reevaluated by this office.

7.1.11 Any changes in the design, location or elevation, as outlined in this report, should be reviewed by this office. Geocon should be contacted to determine the necessity for review and possible revision of this report.

#### 7.2 Soil and Excavation Characteristics

- 7.2.1 The in-situ soils can be excavated with moderate effort using conventional excavation equipment. Some caving should be anticipated in unshored excavations, especially where granular soils are encountered.
- 7.2.2 It is the responsibility of the contractor to ensure that all excavations and trenches are properly shored and maintained in accordance with applicable OSHA rules and regulations to maintain safety and maintain the stability of existing adjacent improvements.
- 7.2.3 All onsite excavations must be conducted in such a manner that potential surcharges from existing structures, construction equipment, and vehicle loads are resisted. The surcharge area may be defined by a 1:1 projection down and away from the bottom of an existing foundation or vehicle load. Penetrations below this 1:1 projection will require special excavation measures such as sloping or shoring. Excavation recommendations are provided in the *Temporary Excavations* section of this report (see Section 7.17).
- 7.2.4 The existing site soils encountered at the proposed foundation elevation during this investigation are considered to have a "low" expansive potential (EI = 47); and are classified as "expansive" based on the 2016 California Building Code (CBC) Section 1803.5.3. Recommendations presented herein assume that the building foundations and slabs will derive support in these materials.

## 7.3 Minimum Resistivity, pH, and Water-Soluble Sulfate

- 7.3.1 Potential of Hydrogen (pH) and resistivity testing as well as chloride content testing were performed on representative samples of soil to generally evaluate the corrosion potential to surface utilities. The tests were performed in accordance with California Test Method Nos. 643 and 422 and indicate that the soils are considered "corrosive" with respect to corrosion of buried ferrous metals on site. The results are presented in Appendix B (Figure B9) and should be considered for design of underground structures.
- 7.3.2 Laboratory tests were performed on representative samples of the site materials to measure the percentage of water-soluble sulfate content. Results from the laboratory water-soluble sulfate tests are presented in Appendix B (Figure B9) and indicate that the on-site materials possess "negligible" sulfate exposure to concrete structures as defined by 2016 CBC Section 1904 and ACI 318-11 Sections 4.2 and 4.3.

7.3.3 Geocon West, Inc. does not practice in the field of corrosion engineering and mitigation. If corrosion sensitive improvements are planned, it is recommended that a corrosion engineer be retained to evaluate corrosion test results and incorporate the necessary precautions to avoid premature corrosion of buried metal pipes and concrete structures in direct contact with the soils.

#### 7.4 Grading

- 7.4.1 Grading is anticipated to include excavation of site soils for the subterranean level, foundations, and utility trenches, as well as placement of backfill for walls, ramps, and trenches.
- 7.4.2 Earthwork should be observed, and compacted fill tested by representatives of Geocon West, Inc. The existing fill and alluvial soil encountered during exploration is suitable for re-use as engineered fill, provided any encountered oversize material (greater than 6 inches) and any encountered deleterious debris are removed.
- 7.4.3 A preconstruction conference should be held at the site prior to the beginning of grading operations with the owner, contractor, civil engineer, geotechnical engineer, and building official in attendance. Special soil handling requirements can be discussed at that time.
- 7.4.4 Grading should commence with the removal of all existing vegetation and existing improvements from the area to be graded. Deleterious debris such as wood and root structures should be exported from the site and should not be mixed with the fill soils. Asphalt and concrete should not be mixed with the fill soils unless approved by the Geotechnical Engineer. All existing underground improvements planned for removal should be completely excavated and the resulting depressions properly backfilled in accordance with the procedures described herein. Once a clean excavation bottom has been established it must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon West, Inc.) and the City of Los Angeles Inspector.
- 7.4.5 The City of Los Angeles Department of Building and Safety requires a minimum compactive effort of 95 percent of the laboratory maximum dry density in accordance with ASTM D 1557 (latest edition) where the soils to be utilized in the fill have less than 15 percent finer than 0.005 millimeters. Soils with more than 15 percent finer than 0.005 millimeters may be compacted to 90 percent of the laboratory maximum dry density in accordance with ASTM D 1557 (latest edition). All fill and backfill soils should be placed in horizontal loose layers approximately 6 to 8 inches thick, moisture conditioned to optimum moisture content, and properly compacted to the required degree of compaction in accordance with ASTM D 1557 (latest edition).

- 7.4.6 Foundations for small outlying structures, such as block walls up to 6 feet high, planter walls or trash enclosures, which will not be tied to the proposed building, may be supported on conventional foundations deriving support on a minimum of 12 inches of newly placed engineered fill which extends laterally at least 12 inches beyond the foundation area. Where excavation and proper compaction cannot be performed or is undesirable, foundations may derive support directly in the undisturbed alluvial soils, and should be deepened as necessary to maintain a minimum 12-inch embedment into the recommended bearing materials. If the soils exposed in the excavation bottom are soft or loose, compaction of the soils will be required prior to placing steel or concrete. Compaction of the foundation excavation bottom is typically accomplished with a compaction wheel or mechanical whacker and must be observed and approved by a Geocon representative.
- 7.4.7 Although not anticipated for this project, all imported fill shall be observed, tested, and approved by Geocon West, Inc. prior to bringing soil to the site. Rocks larger than 6 inches in diameter shall not be used in the fill. If necessary, import soils used as structural fill should have an expansion index less than 20 and corrosivity properties that are equally or less detrimental to that of the existing onsite soils (see Figure B9).
- 7.4.8 Utility trenches should be properly backfilled in accordance with the requirements of the Green Book (latest edition). The pipe should be bedded with clean sands (Sand Equivalent greater than 30) to a depth of at least 1 foot over the pipe, and the bedding material must be inspected and approved in writing by the Geotechnical Engineer (a representative of Geocon). The use of gravel is not acceptable unless used in conjunction with filter fabric to prevent the gravel from having direct contact with soil. The remainder of the trench backfill may be derived from onsite soil or approved import soil, compacted as necessary, until the required compaction is obtained. The use of minimum 2-sack slurry as backfill is also acceptable (see Section 7.5). Prior to placing any bedding materials or pipes, the excavation bottom must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon).
- 7.4.9 All trench and foundation excavation bottoms must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon), prior to placing bedding materials, fill, steel, gravel, or concrete.

# 7.5 Controlled Low Strength Material (CLSM)

7.5.1 Controlled Low Strength Material (CLSM) may be utilized in lieu of compacted soil as engineered fill where approved in writing by the Geotechnical Engineer. Where utilized within the City of Los Angeles use of CLSM is subject to the following requirements:

# **Standard Requirements**

- 1. CLSM shall be ready-mixed by a City of Los Angeles approved batch plant;
- 2. CLSM shall not be placed on uncertified fill, on incompetent natural soil, nor below water;
- 3. CLSM shall not be placed on a sloping surface with a gradient steeper than 5:1 (horizontal to vertical);
- 4. Placement of the CLSM shall be under the continuous inspection of a concrete deputy inspector;
- 5. The excavation bottom shall be accepted by the soil engineer and the City Inspector prior to placing CLSM.

## Requirements for CLSM that will be used for support of footings

- 1. The cement content of the CLSM shall not be less than 188 pounds per cubic yard (min. 2 sacks);
- 2. The excavation bottom must be level, cleaned of loose soils and approved in writing by Geocon prior to placement of the CLSM;
- 3. The ultimate compressive strength of the CLSM shall be no less than 100 pounds per square inch (psi) when tested on the 28th-day per ASTM D4832 (latest edition), Standard Test Method for Preparation and Testing of Controlled Low Strength Material Test Cylinders. Compression testing will be performed in accordance with ASTM C39 and City of Los Angeles requirements;
- 4. Samples of the CLSM will be collected during placement, a minimum of one test (two cylinders) for each 50 cubic yards or fraction thereof;
- 5. Overexcavation for CLSM placement shall extend laterally beyond the footprint of any proposed footings as required for placement of compacted fill, unless justified otherwise by the soil engineer that footings will have adequate vertical and horizontal bearing capacity.

#### 7.6 Foundation Design

- 7.6.1 The proposed structure may be supported on a conventional spread foundation system deriving support in the competent alluvium found at and below a depth of 10 feet. Foundations should be deepened as necessary to penetrate through soft or unsuitable alluvium at the direction of the Geotechnical Engineer. All foundation excavations must be observed and approved by the Geotechnical Engineer (a representative of Geocon), prior to placing steel or concrete.
- 7.6.2 Continuous footings may be designed for an allowable bearing capacity of 3,000 pounds per square foot (psf), and should be a minimum of 12 inches in width, 24 inches in depth below the lowest adjacent grade, and 12 inches into the recommended bearing material.
- 7.6.3 Isolated spread foundations may be designed for an allowable bearing capacity of 3,800 psf, and should be a minimum of 24 inches in width, 24 inches in depth below the lowest adjacent grade, and 12 inches into the recommended bearing material.
- 7.6.4 The allowable soil bearing pressure above may be increased by 400 psf and 800 psf for each additional foot of foundation width and depth, respectively, up to a maximum allowable soil bearing pressure of 5,800 psf.
- 7.6.5 The allowable bearing pressures may be increased by one-third for transient loads due to wind or seismic forces.
- 7.6.6 If depth increases are utilized for the exterior wall footings, this office should be provided a copy of the final construction plans so that the excavation recommendations presented herein could be properly reviewed and revised if necessary.
- 7.6.7 Continuous footings should be reinforced with four No. 4 steel reinforcing bars, two placed near the top of the footing and two near the bottom. Reinforcement for spread footings should be designed by the project structural engineer.
- 7.6.8 The above foundation dimensions and minimum reinforcement recommendations are based on soil conditions and building code requirements only, and are not intended to be used in lieu of those required for structural purposes.
- 7.6.9 No special subgrade presaturation is required prior to placement of concrete. However, the slab and foundation subgrade should be sprinkled as necessary; to maintain a moist condition as would be expected in any concrete placement.
- 7.6.10 Foundation excavations should be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon West, Inc.), prior to the placement of reinforcing steel and concrete to verify that the excavations and exposed soil conditions are consistent with those anticipated. If unanticipated soil conditions are encountered, foundation modifications may be required.

7.6.11 This office should be provided a copy of the final construction plans so that the excavation recommendations presented herein could be properly reviewed and revised if necessary.

# 7.7 Foundation Settlement

- 7.7.1 The maximum expected static settlement for a structure supported on a conventional foundation system deriving support in the recommended bearing materials and designed with a maximum bearing pressure of 5,800 psf is estimated to be less than <sup>3</sup>/<sub>4</sub> inch and occur below the heaviest loaded structural element. Settlement of the foundation system is expected to occur on initial application of loading. Differential settlement is not expected to exceed <sup>1</sup>/<sub>2</sub> inch over a distance of 20 feet.
- 7.7.2 Once the design and foundation loading configurations for the proposed structures proceeds to a more finalized plan, the estimated settlements presented in this report should be reviewed and revised, if necessary. If the final foundation loading configurations are greater than the assumed loading conditions, the potential for settlement should be reevaluated by this office.

# 7.8 Miscellaneous Foundations

- 7.8.1 Foundations for small outlying structures, such as block walls up to 6 feet in height, planter walls or trash enclosures which will not be tied to the proposed structure may be supported on conventional foundations bearing on a minimum of 12 inches of newly placed engineered fill which extends laterally at least 12 inches beyond the foundation area. Where excavation and compaction cannot be performed or is undesirable, such as adjacent to property lines, foundations may derive support in the undisturbed alluvial soils, and should be deepened as necessary to maintain a minimum 12-inch embedment into the recommended bearing materials.
- 7.8.2 If the soils exposed in the excavation bottom are soft, compaction of the soft soils will be required prior to placing steel or concrete. Compaction of the foundation excavation bottom is typically accomplished with a compaction wheel or mechanical whacker and must be observed and approved by a Geocon representative. Miscellaneous foundations may be designed for a bearing value of 1,500 psf, and should be a minimum of 12 inches in width, 18 inches in depth below the lowest adjacent grade and 12 inches into the recommended bearing material. The allowable bearing pressure may be increased by up to one-third for transient loads due to wind or seismic forces.
- 7.8.3 Foundation excavations should be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon West, Inc.), prior to the placement of reinforcing steel and concrete to verify that the excavations and exposed soil conditions are consistent with those anticipated.

#### 7.9 Lateral Design

- 7.9.1 Resistance to lateral loading may be provided by friction acting at the base of foundations, slabs and by passive earth pressure. An allowable coefficient of friction of 0.4 may be used with the dead load forces in the competent alluvial soils or in properly compacted engineered fill.
- 7.9.2 Passive earth pressure for the sides of foundations and slabs poured against competent alluvial soils or newly placed engineered fill may be computed as an equivalent fluid having a density of 290 pounds per cubic foot (pcf) with a maximum earth pressure of 2,900 psf. When combining passive and friction for lateral resistance, the passive component should be reduced by one-third.

## 7.10 Concrete Slabs-on-Grade

- 7.10.1 Unless specifically evaluated and designed by a qualified structural engineer, the slab-on-grade subject to vehicle loading should be a minimum of 5 inches of concrete reinforced with No. 4 steel reinforcing bars placed 16 inches on center in both horizontal directions and positioned vertically near the slab midpoint. The concrete slab-on-grade and ramp may derive support directly on the undisturbed alluvial soils at the excavation bottom as well as compacted soils, if necessary. Any disturbed soils should be properly compacted for slab support. Soil placed and compacted for ramp and slab support should be moisture conditioned to optimum moisture content and properly compacted to at least 95 percent relative compaction, as determined by ASTM Test Method D 1557 (latest edition) for ramp support.
- 7.10.2 Slabs-on-grade at the ground surface that may receive moisture-sensitive floor coverings or may be used to store moisture-sensitive materials should be underlain by a vapor retarder placed directly beneath the slab. The vapor retarder and acceptable permeance should be specified by the project architect or developer based on the type of floor covering that will be installed. The vapor retarder design should be consistent with the guidelines presented in Section 9.3 of the American Concrete Institute's (ACI) Guide for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials (ACI 302.2R-06) and should be installed in general conformance with ASTM E 1643 (latest edition) and the manufacturer's recommendations. A minimum thickness of 15 mils extruded polyolefin plastic is recommended; vapor retarders which contain recycled content or woven materials are not recommended. The vapor retarder should have a permeance of less than 0.01 perms demonstrated by testing before and after mandatory conditioning. The vapor retarder should be installed in direct contact with the concrete slab with proper perimeter seal. If the California Green Building Code requirements apply to this project, the vapor retarder should be underlain by 4 inches of clean aggregate. It is important that the vapor retarder be puncture resistant since it will be in direct contact with angular gravel. As an alternative to the clean aggregate suggested in the Green Building Code, it is our opinion that the concrete slab-on-grade may be underlain by a vapor retarder over 4 inches of clean sand (sand

equivalent greater than 30), since the sand will serve a capillary break and will minimize the potential for punctures and damage to the vapor barrier.

- 7.10.3 Due to the nature of the proposed design and intent for a subterranean level, waterproofing of subterranean walls and slabs is suggested. Particular care should be taken in the design and installation of waterproofing to avoid moisture problems, or actual water seepage into the structure through any normal shrinkage cracks which may develop in the concrete walls, floor slab, foundations and/or construction joints. The design and inspection of the waterproofing is not the responsibility of the geotechnical engineer. A waterproofing consultant should be retained in order to recommend a product or method, which would provide protection to subterranean walls, floor slabs and foundations.
- 7.10.4 For seismic design purposes, a coefficient of friction of 0.4 may be utilized between concrete slabs and subgrade soils without a moisture barrier, and 0.15 for slabs underlain by a moisture barrier.
- 7.10.5 Exterior slabs for walkways or flatwork, not subject to traffic loads, should be at least 4 inches thick and reinforced with No. 3 steel reinforcing bars placed 18 inches on center in both horizontal directions, positioned near the slab midpoint. Prior to construction of slabs, the upper 12 inches of subgrade should be moistened to optimum moisture content and properly compacted to at least 95 percent relative compaction, as determined by ASTM Test Method D 1557 (latest edition). Crack control joints should be spaced at intervals not greater than 10 feet and should be constructed using saw-cuts or other methods as soon as practical following concrete placement. Crack control joints should extend a minimum depth of one-fourth the slab thickness. The project structural engineer should design construction joints as necessary.
- 7.10.6 The recommendations of this report are intended to reduce the potential for cracking of slabs due to settlement. However, even with the incorporation of the recommendations presented herein, foundations, stucco walls, and slabs-on-grade may exhibit some cracking due to minor soil movement and/or concrete shrinkage. The occurrence of concrete shrinkage cracks is independent of the supporting soil characteristics. Their occurrence may be reduced and/or controlled by limiting the slump of the concrete, proper concrete placement and curing, and by the placement of crack control joints at periodic intervals, in particular, where re-entrant slab corners occur.

## 7.11 Preliminary Pavement Recommendations

7.11.1 Where new paving is to be placed, it is recommended that all existing fill and soft or unsuitable alluvial soil be removed and properly recompacted for paving support. The client should be aware that excavation and compaction of all soft or unsuitable alluvial soil in the area of new paving is not required, however, paving constructed over existing unsuitable soils may experience increased settlement and/or cracking, and may therefore have a shorter

design life and increased maintenance costs. As a minimum, the upper twelve inches of soil should be scarified and recompacted to at least 95 percent relative compaction, as determined by ASTM Test Method D 1557 (latest edition).

- 7.11.2 The following pavement sections are based on an assumed R-Value of 20. Once site grading activities are complete an R-Value should be obtained by laboratory testing to confirm the properties of the soils serving as paving subgrade, prior to placing pavement.
- 7.11.3 The Traffic Indices listed below are estimates. Geocon does not practice in the field of traffic engineering. The actual Traffic Index for each area should be determined by the project civil engineer. If pavement sections for Traffic Indices other than those listed below are required, Geocon should be contacted to provide additional recommendations. Pavement thicknesses were determined following procedures outlined in the *California Highway Design Manual* (Caltrans). It is anticipated that the majority of traffic will consist of automobile and large truck traffic.

Location	Estimated Traffic Index (TI)	Asphalt Concrete (inches)	Class 2 Aggregate Base (inches)
Automobile Parking and Driveways	4.0	3.0	4.0
Trash Truck & Fire Lanes	7.0	4.0	12.0

PRELIMINARY PAVEMENT DESIGN SECTIONS

- 7.11.4 Asphalt concrete should conform to Section 203-6 of the "Standard Specifications for Public Works Construction" (Green Book). Class 2 aggregate base materials should conform to Section 26-1.02A of the "Standard Specifications of the State of California, Department of Transportation" (Caltrans). The use of Crushed Miscellaneous Base in lieu of Class 2 aggregate base is acceptable. Crushed Miscellaneous Base should conform to Section 200-2.4 of the "Standard Specifications for Public Works Construction" (Green Book).
- 7.11.5 Unless specifically designed and evaluated by the project structural engineer, where exterior concrete paving will be utilized for support of vehicles, it is recommended that the concrete be a minimum of 5 inches of concrete reinforced with No. 3 steel reinforcing bars placed 18 inches on center in both horizontal directions. Concrete paving supporting vehicular traffic should be underlain by a minimum of 4 inches of aggregate base and a properly compacted subgrade. The subgrade and base material should be compacted to 95 percent relative compactions determined by ASTM Test Method D 1557 (latest edition).

7.11.6 The performance of pavements is highly dependent upon providing positive surface drainage away from the edge of pavements. Ponding of water on or adjacent to the pavement will likely result in saturation of the subgrade materials and subsequent cracking, subsidence and pavement distress. If planters are planned adjacent to paving, it is recommended that the perimeter curb be extended at least 12 inches below the bottom of the aggregate base to minimize the introduction of water beneath the paving.

#### 7.12 Retaining Wall Design

- 7.12.1 The recommendations presented below are generally applicable to the design of rigid concrete or masonry retaining walls having a maximum height of 10 feet. In the event that walls higher than 10 feet are planned, Geocon should be contacted for additional recommendations.
- 7.12.2 Retaining wall foundations may be designed in accordance with the recommendations provided in the *Foundation Design* sections of this report (see Section 7.6).
- 7.12.3 Retaining walls with a level backfill surface that are not restrained at the top should be designed utilizing a triangular distribution of pressure (active pressure) of 30 pcf.
- 7.12.4 Restrained walls are those that are not allowed to rotate more than 0.001H (where H equals the height of the retaining portion of the wall in feet) at the top of the wall. Assuming that proper drainage and permanent dewatering is maintained, where walls are restrained from movement at the top, walls may be designed utilizing a triangular distribution of pressure (at-rest pressure) of 50 pcf.
- 7.12.5 The wall pressures provided above assume that the retaining wall will be properly drained preventing the buildup of hydrostatic pressure. If retaining wall drainage is not implemented, the equivalent fluid pressure to be used in design of undrained walls is 90 pcf. The value includes hydrostatic pressures plus buoyant lateral earth pressures.
- 7.12.6 The wall pressures provided above assume that the proposed retaining walls will support relatively undisturbed alluvial soils or engineered fill derived from onsite soils. If import soil will be used to backfill proposed retaining walls, revised earth pressures may be required to account for the geotechnical properties of the import soil used as engineered fill. This should be evaluated once the use of import soil is established. All imported fill shall be observed, tested, and approved by Geocon West, Inc. prior to bringing soil to the site.
- 7.12.7 Additional active pressure should be added for a surcharge condition due to sloping ground, vehicular traffic or adjacent structures and should be designed for each condition as the project progresses.

7.12.8 It is recommended that line-load surcharges from adjacent wall footings, use horizontal pressures generated from NAV-FAC DM 7.2. The governing equations are:



where x is the distance from the face of the excavation or wall to the vertical line-load, H is the distance from the bottom of the footing to the bottom of excavation or wall, z is the depth at which the horizontal pressure is desired,  $Q_z$  is the vertical line-load and H(z) is the horizontal pressure at depth z.

7.12.9 It is recommended that vertical point-loads, from construction equipment outriggers or adjacent building columns use horizontal pressures generated from NAV-FAC DM 7.2. The governing equations are:

$$0.4$$
() =  $\frac{0.28 \times -}{0.16 + -} \times -$ 
and
$$> 0.4$$
() =  $\frac{1.77 \times - \times -}{- + -} \times -$ 
then
() = () (1.1)

where x is the distance from the face of the excavation/wall to the vertical point-load, H is distance from the outrigger/bottom of column footing to the bottom of excavation, z is the depth at which the horizontal pressure is desired,  $Q_2$  is the vertical point-load, H(z) is the horizontal pressure at depth z,  $\theta$  is the angle between a line perpendicular to the excavation/wall and a line from the point-load to location on the excavation/wall where the surcharge is being evaluated, and H(z) is the horizontal pressure at depth z.

- 7.12.10 In addition to the recommended earth pressure, the upper 10 feet of the subterranean wall adjacent to the street and parking lot should be designed to resist a uniform lateral pressure of 100 psf, acting as a result of an assumed 300 psf surcharge behind the walls due to normal street traffic. If the traffic is kept back at least 10 feet from the subterranean walls, the traffic surcharge may be neglected.
- 7.12.11 Seismic lateral forces should be incorporated into the design as necessary, and recommendations for seismic lateral forces are presented below.

## 7.13 Dynamic (Seismic) Lateral Forces

- 7.13.1 The structural engineer should determine the seismic design category for the project in accordance with Section 1613 of the CBC. If the project possesses a seismic design category of D, E, or F, proposed retaining walls in excess of 6 feet in height should be designed with seismic lateral pressure (Section 1803.5.12 of the 2016 CBC).
- 7.13.2 A seismic load of 10 pcf should be used for design of walls that support more than 6 feet of backfill in accordance with Section 1803.5.12 of the 2016 CBC. The seismic load is applied as an equivalent fluid pressure along the height of the wall and the calculated loads result in a maximum load exerted at the base of the wall and zero at the top of the wall. This seismic load should be applied in addition to the active earth pressure. The earth pressure is based on half of two thirds of PGA<sub>M</sub> calculated from ASCE 7-10 Section 11.8.3.

## 7.14 Retaining Wall Drainage

- 7.14.1 Retaining walls should be provided with a drainage system extended at least two-thirds the height of the wall. At the base of the drain system, a subdrain covered with a minimum of 12 inches of gravel should be installed, and a compacted fill blanket or other seal placed at the surface (see Figure 5). The clean bottom and subdrain pipe, behind a retaining wall, should be observed by the Geotechnical Engineer (a representative of Geocon), prior to placement of gravel or compacting backfill.
- 7.14.2 As an alternative, a plastic drainage composite such as Miradrain or equivalent may be installed in continuous, 4-foot wide columns along the entire back face of the wall, at 8 feet on center. The top of these drainage composite columns should terminate approximately 18 inches below the ground surface, where either hardscape or a minimum of 18 inches of relatively cohesive material should be placed as a cap (see Figure 6). These vertical columns of drainage material would then be connected at the bottom of the wall to a collection panel or a one-cubic-foot rock pocket drained by a 4-inch subdrain pipe.
- 7.14.3 Subdrainage pipes at the base of the retaining wall drainage system should outlet to an acceptable location via controlled drainage structures.

7.14.4 Moisture affecting below grade walls is one of the most common post-construction complaints. Poorly applied or omitted waterproofing can lead to efflorescence or standing water. Particular care should be taken in the design and installation of waterproofing to avoid moisture problems, or actual water seepage into the structure through any normal shrinkage cracks which may develop in the concrete walls, floor slab, foundations and/or construction joints. The design and inspection of the waterproofing is not the responsibility of the geotechnical engineer. A waterproofing consultant should be retained in order to recommend a product or method, which would provide protection to subterranean walls, floor slabs and foundations.

#### 7.15 Elevator Pit Design

- 7.15.1 The elevator pit slab and retaining wall should be designed by the project structural engineer. Elevator pits may be designed in accordance with the recommendations in the *Foundation Design* and *Retaining Wall Design* section of this report (see Sections 7.6 and 7.12).
- 7.15.2 Additional active pressure should be added for a surcharge condition due to sloping ground, vehicular traffic, or adjacent foundations and should be designed for each condition as the project progresses.
- 7.15.3 If retaining wall drainage is to be provided, the drainage system should be designed in accordance with the *Retaining Wall Drainage* section of this report (see Section 7.14).
- 7.15.4 It is suggested that the exterior walls and slab be waterproofed to prevent excessive moisture inside of the elevator pit. Waterproofing design and installation is not the responsibility of the geotechnical engineer.

## 7.16 Elevator Piston

- 7.16.1 If a plunger-type elevator piston is installed for this project, a deep drilled excavation will be required. It is important to verify that the drilled excavation is not situated immediately adjacent to a foundation or shoring pile, or the drilled excavation could compromise the existing foundation or pile support, especially if the drilling is performed subsequent to the foundation or pile construction.
- 7.16.2 Casing may be required if caving is experienced in the drilled excavation. The contractor should be prepared to use casing and should have it readily available at the commencement of drilling activities. Continuous observation of the drilling and installation of the elevator piston by the Geotechnical Engineer (a representative of Geocon West, Inc.) is required.
- 7.16.3 The annular space between the piston casing and drilled excavation wall should be filled with a minimum of  $1\frac{1}{2}$ -sack slurry pumped from the bottom up. As an alternative, pea gravel may be utilized. The use of soil to backfill the annular space is not acceptable.

## 7.17 Temporary Excavations

- 7.17.1 Excavations on the order of 12 feet in height are anticipated for excavation and construction of the proposed subterranean levels and foundation system. The excavations are expected to expose alluvial soils, which are suitable for vertical excavations up to 5 feet where loose soils or caving sands are not present or where not surcharged by adjacent traffic or structures.
- 7.17.2 Vertical excavations greater than 5 feet will require sloping and/or shoring measures in order to provide a stable excavation. Where sufficient space is available, temporary unsurcharged embankments could be sloped back at a uniform 1:1 slope gradient or flatter, up to a maximum of 12 feet in height. A uniform slope does not have a vertical portion. Where space is limited, shoring measures will be required. *Shoring* recommendations are provided in Section 7.18 of this report.
- 7.17.3 Where sloped embankments are utilized, the top of the slope should be barricaded to prevent vehicles and storage loads at the top of the slope within a horizontal distance equal to the height of the slope. If the temporary construction embankments are to be maintained during the rainy season, berms are suggested along the tops of the slopes where necessary to prevent runoff water from entering the excavation and eroding the slope faces. Geocon personnel should inspect the soils exposed in the cut slopes during excavation so that modifications of the slopes can be made if variations in the soil conditions occur. All excavations should be stabilized within 30 days of initial excavation.

## 7.18 Shoring – Soldier Pile Design and Installation

- 7.18.1 The following information on the design and installation of shoring is preliminary. Review of the final shoring plans and specifications should be made by this office prior to bidding or negotiating with a shoring contractor.
- 7.18.2 One method of shoring would consist of steel soldier piles, placed in drilled holes and backfilled with concrete. Where maximum excavation heights are less than 12 feet the soldier piles are typically designed as cantilevers. Where excavations exceed 12 feet or are surcharged, soldier piles may require lateral bracing utilizing drilled tie-back anchors or raker braces to maintain an economical steel beam size and prevent excessive deflection. The size of the steel beam, the need for lateral bracing, and the acceptable shoring deflection should be determined by the project shoring engineer.
- 7.18.3 The design embedment of the shoring pile toes must be maintained during excavation activities. The toes of the perimeter shoring piles should be deepened to take into account any required excavations necessary for foundation excavations and/or adjacent drainage systems.

- 7.18.4 The proposed soldier piles may also be designed as permanent piles. The required pile depths, dimensions, and spacing should be determined and designed by the project structural and shoring engineers. All piles utilized for shoring can also be incorporated into a permanent retaining wall system (shotcrete wall) and should be designed in accordance with the earth pressure provided in the *Retaining Wall Design* section of this report (see Section 7.12).
- 7.18.5 Drilled cast-in-place soldier piles should be placed no closer than three diameters on center. The minimum diameter of the piles is 18 inches. Structural concrete should be used for the soldier piles below the excavation; lean-mix concrete may be employed above that level. As an alternative, lean-mix concrete may be used throughout the pile where the reinforcing consists of a wideflange section. The slurry must be of sufficient strength to impart the lateral bearing pressure developed by the wideflange section to the soil. For design purposes, an allowable passive value for the soils below the bottom plane of excavation may be assumed to be 290 psf per foot. The allowable passive value may be doubled for isolated piles spaced a minimum of three times the pile diameter. To develop the full lateral value, provisions should be implemented to assure firm contact between the soldier piles and the undisturbed alluvium.
- 7.18.6 Groundwater was not encountered during exploration; however, the contractor should be prepared for groundwater during pile installation should the need arise. Local seepage may be encountered during excavations for the proposed soldier piles, especially if conducted during the rainy season. If more than 6 inches of water is present in the bottom of the excavation, a tremie is required to place the concrete into the bottom of the hole. A tremie should consist of a rigid, water-tight tube having a diameter of not less than 6 inches with a hopper at the top. The tube should be equipped with a device that will close the discharge end and prevent water from entering the tube while it is being charged with concrete. The tremie should be supported so as to permit free movement of the discharge end over the entire top surface of the work and to permit rapid lowering when necessary to retard or stop the flow of concrete. The discharge end should be closed at the start of the work to prevent water entering the tube and should be entirely sealed at all times, except when the concrete is being placed. The tremie tube should be kept full of concrete. The flow should be continuous until the work is completed and the resulting concrete seal should be monolithic and homogeneous. The tip of the tremie tube should always be kept about 5 feet below the surface of the concrete and definite steps and safeguards should be taken to insure that the tip of the tremie tube is never raised above the surface of the concrete.
- 7.18.7 A special concrete mix should be used for concrete to be placed below water. The design should provide for concrete with an unconfined compressive strength psi of 1,000 psi over the initial job specification. An admixture that reduces the problem of segregation of paste/aggregates and dilution of paste should be included. The slump should be commensurate to any research report

for the admixture, provided that it should also be the minimum for a reasonable consistency for placing when water is present.

- 7.18.8 Casing may be required if caving is encountered, and the contractor should have casing available prior to commencement of pile excavation. When casing is used, extreme care should be employed so that the pile is not pulled apart as the casing is withdrawn. At no time should the distance between the surface of the concrete and the bottom of the casing be less than 5 feet. As an alternative, piles may be vibrated into place; however, there is always a risk that excessive vibrations in sandy soils could induce settlements and distress to adjacent offsite improvements. Continuous observation of the drilling and pouring of the piles by the Geotechnical Engineer (a representative of Geocon West, Inc.), is required.
- 7.18.9 The frictional resistance between the soldier piles and retained soil may be used to resist the vertical component of the anchor load. The coefficient of friction may be taken as 0.4 based on uniform contact between the steel beam and lean-mix concrete and retained earth. The portion of soldier piles below the plane of excavation may also be employed to resist the downward loads. The downward capacity may be determined using a frictional resistance of 460 psf per foot.
- 7.18.10 Due to the nature of the site soils, it is expected that continuous lagging between soldier piles will be required. However, it is recommended that the exposed soils be observed by the Geotechnical Engineer (a representative of Geocon West, Inc.), to verify the presence of any competent, cohesive soils and the areas where lagging may be omitted.
- 7.18.11 The time between lagging excavation and lagging placement should be as short as possible soldier piles should be designed for the full-anticipated pressures. Due to arching in the soils, the pressure on the lagging will be less. It is recommended that the lagging be designed for the full design pressure but be limited to a maximum of 400 psf.
- 7.18.12 For the design of shoring, it is recommended that an equivalent fluid pressure based on the following table, be utilized for design. A diagram depicting the trapezoidal pressure distribution of lateral earth pressure is provided in the table on the following page.

HEIGHT OF SHORING (FEET)	EQUIVALENT FLUID PRESSURE (Pounds Per Cubic Foot) (ACTIVE PRESSURE)	EQUIVALENT FLUID PRESSURE Trapezoidal (Where H is the height of the shoring in feet)
Up to 12	25	16H

Trapezoidal Distribution of Pressure



- 7.18.13 It is very important to note that active pressures can only be achieved when movement in the soil (earth wall) occurs. If movement in the soil is not acceptable, such as adjacent to an existing structure, an at-rest pressure of 45 pcf should be considered for design purposes.
- 7.18.14 Where a combination of sloped embankment and shoring is utilized, the pressure will be greater and must be determined for each combination. Additional active pressure should be added for a surcharge condition due to sloping ground, vehicular traffic, or adjacent structures and must be determined for each combination.
- 7.18.15 It is recommended that line-load surcharges from adjacent wall footings, use horizontal pressures generated from NAV-FAC DM 7.2. The governing equations are:



where x is the distance from the face of the excavation or wall to the vertical line-load, H is the distance from the bottom of the footing to the bottom of excavation or wall, z is the depth at which the horizontal pressure is desired, Q is the vertical line-load and H(z) is the horizontal pressure at depth z.

7.18.16 It is recommended that vertical point-loads, from construction equipment outriggers or adjacent building columns use horizontal pressures generated from NAV-FAC DM 7.2. The governing equations are:

$$() = \frac{0.4}{0.28 \times -} \times -$$

and

> 0.4 () =  $\frac{1.77 \times - \times -}{- + -} \times$ then () = () (1.1)

where x is the distance from the face of the excavation/wall to the vertical point-load, H is distance from the outrigger/bottom of column footing to the bottom of excavation, z is the depth at which the horizontal pressure is desired, Q is the vertical point-load, H(z) is the horizontal pressure at depth z,  $\theta$  is the angle between a line perpendicular to the excavation/wall and a line from the point-load to location on the excavation/wall where the surcharge is being evaluated, and H(z) is the horizontal pressure at depth z.

- 7.18.17 In addition to the recommended earth pressure, the upper ten feet of the shoring adjacent to the street or driveway areas should be designed to resist a uniform lateral pressure of 100 psf, acting as a result of an assumed 300 psf surcharge behind the shoring due to normal street traffic. If the traffic is kept back at least ten feet from the shoring, the traffic surcharge may be neglected.
- 7.18.18 It is difficult to accurately predict the amount of deflection of a shored embankment. It should be realized that some deflection will occur. It is recommended that the deflection be minimized to prevent damage to existing structures and adjacent improvements. Where public right-of-ways are present or adjacent offsite structures do not surcharge the shoring excavation, the shoring deflection should be limited to less than 1 inch at the top of the shored embankment. Where offsite structures are within the shoring surcharge area it is recommended that the beam deflection be limited to less than 1<sup>1</sup>/<sub>2</sub> inch at the elevation of the adjacent offsite foundation, and no deflection at all if deflections will damage existing structures. The allowable deflection is dependent on many factors, such as the presence of structures and utilities near the top of the embankment, and will be assessed and designed by the project shoring engineer.

- 7.18.19 Because of the depth of the excavation, some means of monitoring the performance of the shoring system is suggested. The monitoring should consist of periodic surveying of the lateral and vertical locations of the tops of all soldier piles and the lateral movement along the entire lengths of selected soldier piles.
- 7.18.20 Due to the depth of the depth of the excavation and proximity to adjacent structures, it is suggested that prior to excavation the existing improvements be inspected to document the present condition. For documentation purposes, photographs should be taken of preconstruction distress conditions and level surveys of adjacent grade and pavement should be considered. During excavation activities, the adjacent structures and pavement should be periodically inspected for signs of distress. In the even that distress or settlement is noted, an investigation should be performed and corrective measures taken so that continued or worsened distress or settlement is mitigated. Documentation and monitoring of the offsite structures and improvements is not the responsibility of the geotechnical engineer.

## 7.19 Temporary Tie-Back Anchors

- 7.19.1 Temporary tie-back anchors may be used with the solider pile wall system to resist lateral loads. Post-grouted friction anchors are recommended. For design purposes, it may be assumed that the active wedge adjacent to the shoring is defined by a plane drawn 35 degrees with the vertical through the bottom plane of the excavation. Friction anchors should extend a minimum of 20 feet beyond the potentially active wedge and to greater lengths if necessary to develop the desired capacities. The locations and depths of all offsite utilities should be thoroughly checked and incorporated into the drilling angle design for the tie-back anchors.
- 7.19.2 The capacities of the anchors should be determined by testing of the initial anchors as outlined in a following section. Only the frictional resistance developed beyond the active wedge would be effective in resisting lateral loads. Anchors should be placed at least 6 feet on center to be considered isolated. For preliminary design purposes, it is estimated that drilled friction anchors constructed without utilizing post-grouting techniques will develop average skin frictions as follows:
  - 5 feet below the top of the excavation -840 pounds per square foot
- 7.19.3 Depending on the techniques utilized, and the experience of the contractor performing the installation, a maximum allowable friction capacity of 2.5 kips per linear foot for post-grouted anchors (for a minimum 20 foot length beyond the active wedge) may be assumed for design purposes. Only the frictional resistance developed beyond the active wedge should be utilized in resisting lateral loads.

#### 7.20 Anchor Installation

7.20.1 Tied-back anchors are typically installed between 20 and 40 degrees below the horizontal; however, occasionally alternative angles are necessary to avoid existing improvements and utilities. The locations and depths of all offsite utilities should be thoroughly checked prior to design and installation of the tie-back anchors. Caving of the anchor shafts, particularly within sand and gravel deposits or seepage zones, should be anticipated during installation and provisions should be implemented in order to minimize such caving. It is suggested that hollow-stem auger drilling equipment be used to install the anchors. The anchor shafts should be filled with concrete by pumping from the tip out, and the concrete should extend from the tip of the anchor to the active wedge. In order to minimize the chances of caving, it is recommended that the portion of the anchor shaft within the active wedge be backfilled with sand before testing the anchor. This portion of the shaft should be filled tightly and flush with the face of the excavation. The sand backfill should be placed by pumping; the sand may contain a small amount of cement to facilitate pumping.

## 7.21 Anchor Testing

- 7.21.1 All of the anchors should be tested to at least 150 percent of design load. The total deflection during this test should not exceed 12 inches. The rate of creep under the 150 percent test load should not exceed 0.1 inch over a 15-minute period in order for the anchor to be approved for the design loading.
- 7.21.2 At least ten percent of the anchors should be selected for "quick" 200 percent tests and three additional anchors should be selected for 24-hour 200 percent tests. The purpose of the 200 percent tests is to verify the friction value assumed in design. The anchors should be tested to develop twice the assumed friction value. These tests should be performed prior to installation of additional tiebacks. Where satisfactory tests are not achieved on the initial anchors, the anchor diameter and/or length should be increased until satisfactory test results are obtained.
- 7.21.3 The total deflection during the 24-hour 200 percent test should not exceed 12 inches. During the 24-hour tests, the anchor deflection should not exceed 0.75 inches measured after the 200 percent test load is applied.
- 7.21.4 For the "quick" 200 percent tests, the 200 percent test load should be maintained for 30 minutes. The total deflection of the anchor during the 200 percent quick tests should not exceed 12 inches; the deflection after the 200 percent load has been applied should not exceed 0.25 inch during the 30-minute period.

7.21.5 After a satisfactory test, each anchor should be locked-off at the design load. This should be verified by rechecking the load in the anchor. The load should be within 10 percent of the design load. A representative of this firm should observe the installation and testing of the anchors.

#### 7.22 Internal Bracing

7.22.1 Rakers may be utilized to brace the soldier piles in lieu of tieback anchors. The raker bracing could be supported laterally by temporary concrete footings (deadmen) or by the permanent, interior footings. For design of such temporary footings or deadmen, poured with the bearing surface normal to rakers inclined at 45 degrees, a bearing value of 1,500 psf may be used, provided the shallowest point of the footing is at least one foot below the lowest adjacent grade. The structural engineer should review the shoring plans to determine if raker footings conflict with the structural foundation system. The client should be aware that the utilization of rakers could significantly impact the construction schedule due to their intrusion into the construction site and potential interference with equipment.

## 7.23 Stormwater Infiltration

7.23.1 During the September 15, 2017 site exploration, boring B2 was utilized to perform percolation testing. The boring was advanced to the depth listed in the table below. Slotted casing was placed in the boring, and the annular space between the casing and excavation was filled with gravel. The boring was then filled with water to pre-saturate the soils. On September 18, 2017, the casing was refilled with water and percolation test readings were performed after repeated flooding of the cased excavation. Based on the test results, the measured percolation rate and design infiltration rate, for the earth materials encountered, are provided in the following table. These values have been calculated in accordance with the Boring Percolation Test Procedure in the County of Los Angeles Department of Public Works GMED *Guidelines for Geotechnical Investigation and Reporting, Low Impact Development Stormwater Infiltration* (June 2017). Percolation test field data and calculation of the measured percolation rate and design infiltration rate are provided on Figure 7.

Boring	Soil Type	Infiltration Depth (ft)	Measured Percolation Rate (in / hour)	Design Infiltration Rate (in / hour)
B2	Sandy Silt (ML)	25-40 <sup>1</sup> / <sub>2</sub>	0.45	0.11

7.23.2 The results of the percolation testing indicated that the infiltration rate within the existing fill is less than the generally accepted minimally required infiltration rate of 0.3 inches per hour. Therefore, based on these considerations, a stormwater infiltration system is not recommended for this development. It is suggested that stormwater be retained, filtered and discharged in accordance with the requirements of the local governing agency.

#### 7.24 Surface Drainage

- 7.24.1 Proper surface drainage is critical to the future performance of the project. Uncontrolled infiltration of irrigation excess and storm runoff into the soils can adversely affect the performance of the planned improvements. Saturation of a soil can cause it to lose internal shear strength and increase its compressibility, resulting in a change in the original designed engineering properties. Proper drainage should be maintained at all times.
- 7.24.2 All site drainage should be collected and controlled in non-erosive drainage devices. Drainage should not be allowed to pond anywhere on the site, and especially not against any foundation or retaining wall. The site should be graded and maintained such that surface drainage is directed away from structures in accordance with 2016 CBC 1804.4 or other applicable standards. In addition, drainage should not be allowed to flow uncontrolled over any descending slope. Discharge from downspouts, roof drains and scuppers are not recommended onto unprotected soils within 5 feet of the building perimeter. Planters which are located adjacent to foundations should be sealed to prevent moisture intrusion into the soils providing foundation support. Landscape irrigation is not recommended within 5 feet of the building perimeters.
- 7.24.3 Positive site drainage should be provided away from structures, pavement, and the tops of slopes to swales or other controlled drainage structures. The building pad and pavement areas should be fine graded such that water is not allowed to pond.
- 7.24.4 Landscaping planters immediately adjacent to paved areas are not recommended due to the potential for surface or irrigation water to infiltrate the pavement's subgrade and base course. Either a subdrain, which collects excess irrigation water and transmits it to drainage structures, or an impervious above-grade planter boxes should be used. In addition, where landscaping is planned adjacent to the pavement, it is recommended that consideration be given to providing a cutoff wall along the edge of the pavement that extends at least 12 inches below the base material.

## 7.25 Plan Review

7.25.1 Grading, foundation, and shoring plans should be reviewed by the Geotechnical Engineer (a representative of Geocon West, Inc.), prior to finalization to verify that the plans have been prepared in substantial conformance with the recommendations of this report and to provide additional analyses or recommendations.

#### LIMITATIONS AND UNIFORMITY OF CONDITIONS

- 1. The recommendations of this report pertain only to the site investigated and are based upon the assumption that the soil conditions do not deviate from those disclosed in the investigation. If any variations or undesirable conditions are encountered during construction, or if the proposed construction will differ from that anticipated herein, Geocon West, Inc. should be notified so that supplemental recommendations can be given. The evaluation or identification of the potential presence of hazardous or corrosive materials was not part of the scope of services provided by Geocon West, Inc.
- 2. This report is issued with the understanding that it is the responsibility of the owner, or of his representative, to ensure that the information and recommendations contained herein are brought to the attention of the architect and engineer for the project and incorporated into the plans, and the necessary steps are taken to see that the contractor and subcontractors carry out such recommendations in the field.
- 3. The findings of this report are valid as of the date of this report. However, changes in the conditions of a property can occur with the passage of time, whether they are due to natural processes or the works of man on this or adjacent properties. In addition, changes in applicable or appropriate standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside our control. Therefore, this report is subject to review and should not be relied upon after a period of three years.
- 4. The firm that performed the geotechnical investigation for the project should be retained to provide testing and observation services during construction to provide continuity of geotechnical interpretation and to check that the recommendations presented for geotechnical aspects of site development are incorporated during site grading, construction of improvements, and excavation of foundations. If another geotechnical firm is selected to perform the testing and observation services during construction operations, that firm should prepare a letter indicating their intent to assume the responsibilities of project geotechnical engineer of record. A copy of the letter should be provided to the regulatory agency for their records. In addition, that firm should provide revised recommendations concerning the geotechnical aspects of the proposed development, or a written acknowledgement of their concurrence with the recommendations presented in our report. They should also perform additional analyses deemed necessary to assume the role of Geotechnical Engineer of Record.

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# EAST LOS ANGELES COMMUNITY CORPORATION







### BORING PERCOLATION TEST FIELD LOG

Date: Project Number: Project Location: Earth Description: Tested By: Liquid Description: Measurement Method:

Start Time for Pre-Soak: Start Time for Standard:

Boring/Test Number:		
Diameter of Boring:	8	inches
Diameter of Casing:	2	inches
Depth of Boring:	40.5	feet
Depth to Invert of BMP:	25	feet
Depth to Water Table:	80	feet
Depth to Initial Water Depth (d <sub>1</sub> ):	300	inches

30 min

Reading Number	Time Start (hh:mm)	Time End (hh:mm)	Elapsed Time ∆time (min)	Water Drop During Standard Time Interval, d (in)	
1	10:30 AM	11:00 AM	30	42.1	
2	11:00 AM	11:30 AM	30	37.4	
3	11:30 AM	12:00 PM	30	32.9	
4	12:00 PM	12:30 PM	30	27.0	
5	12:30 PM	1:00 PM	30	23.2	
6	1:00 PM	1:30 PM	30	21.7	
7	1:30 PM	2:00 PM	30	21.0	
8	2:00 PM	2:30 PM	30	20.9	

* Calculations Bel	ow Based on Sta	abilized Rea	idings Only	/				
Borir	ng Radius, r:	4	inches		Test Section Surface Area, $A = 2\pi rh + \pi r^2$			
Test Section	on Height, h:	186.0	inches		A =	4725	in <sup>2</sup>	
Disch	arged Water Vo	$lume, V = \pi$	r²∆d		Percolation Rate = $\left(\frac{V/A}{\Delta T}\right)$			
Reading 6	V =	1092	in <sup>3</sup>		Percolation Rate =	0.46	inches/hour	
Reading 7	V =	1056	in <sup>3</sup>		Percolation Rate =	0.45	inches/hour	
Reading 8	V =	1050	in <sup>3</sup>		Percolation Rate =	0.44	inches/hour	
				ſ	Measured Percolation Rate =	0.45	inches/hour	
Reduction Facto	rs							
I	Boring Percolation	on Test, RF <sub>t</sub>	=	2	Total Reductio	n Factor, RF =	$= RF_t + RF_v + RF_s$	
	Site Va	riability, RF <sub>v</sub>	. =	1	Total R	Reduction Fact	tor = 4	
	Long Term S	iltation, RF <sub>s</sub>	=	1				
Design Infiltration Rate					Design Infiltration Rate =	= Measured P	Percolation Rate /RF	
					Design Infiltration Rate =	0.11	inches/hour	



## **APPENDIX A**

## FIELD INVESTIGATION

The site was explored on September 15, 2017, by excavating three 8-inch-diameter borings utilizing a truck-mounted hollow-stem auger drilling machine. The borings were excavated to depths of approximately 30<sup>1</sup>/<sub>2</sub> and 40<sup>1</sup>/<sub>2</sub> feet below the existing ground surface. Representative and relatively undisturbed samples were obtained by driving a 3-inch, O. D., California Modified Sampler into the "undisturbed" soil mass with blows from a 140-pound hammer falling 30 inches. The California Modified Sampler was equipped with 1-inch high by 2 <sub>3</sub>/<sub>8</sub>-inch diameter brass sampler rings to facilitate soil removal and testing. Bulk samples were also obtained.

The soil conditions encountered in the borings were visually examined, classified and logged in general accordance with the Unified Soil Classification System (USCS). The logs of the borings are presented on Figures A1 through A3. The log depicts the soil and geologic conditions encountered and the depth at which samples were obtained. The logs also include our interpretation of the conditions between sampling intervals. Therefore, the logs contain both observed and interpreted data. We determined the lines designating the interface between soil materials on the logs using visual observations, penetration rates, excavation characteristics and other factors. The transition between materials may be abrupt or gradual. Where applicable, the boring logs were revised based on subsequent laboratory testing. The location of the borings are shown on Figure 2A.

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## **APPENDIX B**

# LABORATORY TESTING

Laboratory tests were performed in accordance with generally accepted test methods of the "American Society for Testing and Materials (ASTM)", or other suggested procedures. Selected samples were tested for direct shear strength, consolidation and expansion characteristics, corrosivity, in-place dry density and moisture content. The results of the laboratory tests are summarized in Figures B1 through B9. The in-place dry density and moisture content of the samples tested are presented on the boring logs, Appendix A.







Direct Shear, Saturated





# DIRECT SHEAR TEST RESULTS









WATER ADDED AT 2 KSF

**Consolidation Pressure (KSF)** 





CONSOLIDATION TEST RESULTS

# SUMMARY OF LABORATORY EXPANSION INDEX TEST RESULTS ASTM D 4829-11

Sample No.	Moisture C	content (%)	Dry	Expansion	*UBC	**CBC	
Sample No.	Before	After	Density (pcf)	Índex	Classification	Classification	
B1 @ 10-15'	9.6	19.7	109.7	47	Low	Expansive	

\* Reference: 1997 Uniform Building Code, Table 18-I-B.

\*\* Reference: 2016 California Building Code, Section 1803.5.3

# SUMMARY OF LABORATORY MAXIMUM DENSITY AND AND OPTIMUM MOISTURE CONTENT TEST RESULTS ASTM D 1557-12

Sample No.	Soil	Maximum Dry	Optimum
	Description	Density (pcf)	Moisture (%)
B1 @ 10-15'	Dark Grey Silty Sand	125.0	11.0



# SUMMARY OF LABORATORY POTENTIAL OF HYDROGEN (pH) AND RESISTIVITY TEST RESULTS CALIFORNIA TEST NO. 643

Sample No.	рН	Resistivity (ohm centimeters)
B3 @ 0-5'	8.05	1800 (Corrosive)
B1 @ 10-15'	7.80	1900 (Corrosive)

# SUMMARY OF LABORATORY CHLORIDE CONTENT TEST RESULTS EPA NO. 325.3

Sample No.	Chloride Ion Content (%)		
B3 @ 0-5'	0.003		
B1 @ 10-15'	0.010		

# SUMMARY OF LABORATORY WATER SOLUBLE SULFATE TEST RESULTS CALIFORNIA TEST NO. 417

Sample No.	Water Soluble Sulfate (% SO <sub>4</sub> )	Sulfate Exposure*
B3 @ 0-5'	0.017	Negligible
B1 @ 10-15'	0.006	Negligible

\* Reference: 2016 California Building Code, Section 1904.3 and ACI 318-11 Section 4.3.



# Appendix F

Soils Report Approval Letter BOARD OF BUILDING AND SAFETY COMMISSIONERS

VAN AMBATIELOS

E. FELICIA BRANNON VICE PRESIDENT

JOSELYN GEAGA-ROSENTHAL GEORGE HOVAGUIMIAN JAVIER NUNEZ CITY OF LOS ANGELES



ERIC GARCETTI MAYOR DEPARTMENT OF BUILDING AND SAFETY 201 NORTH FIGUEROA STREET LOS ANGELES, CA 90012

FRANK M. BUSH GENERAL MANAGER SUPERINTENDENT OF BUILDING

OSAMA YOUNAN, P.E. EXECUTIVE OFFICER

# SOILS REPORT APPROVAL LETTER

October 15, 2018

LOG # 105284 SOILS/GEOLOGY FILE - 2

East Los Angeles Community Corporation 2917 East 1st Street, Suite 101 Los Angeles, CA 90033

TRACT:	Stevenson's Sub. of a Part Lot 6 Block 60 Hancock Survey (M R 5-568)
BLOCK:	2
LOTS:	12 (Arb 1 & 2) & 13 (Arb 1 & 2) // 8 & 9
LOCATION:	119 & 121 S. Soto Street // 2316 & 2324 E. 1st Street

CURRENT REFERENCE	REPORT	DATE OF	
REPORT/LETTER(S)	<u>No.</u>	DOCUMENT	PREPARED BY
Soils Report	A9622-06-01	04/16/2018	Geocon West, Inc.

The Grading Division of the Department of Building and Safety has reviewed the referenced report that provides recommendations for the proposed 66-unit, 5-story mixed-use structure over 1-level of subterranean parking, as shown on the Site Plan (FIG. 2A) and Cross Sections (FIG. 2B) in the 04/16/2018 report. According to the consultants, the structure is to be constructed on the southern portion of the property while the northern portion will comprised of open space, with no structures.

Three borings were excavated to depths between 30.5 and 40.5 feet. The earth materials at the subsurface exploration locations consist of up to 4.5 feet of uncertified fill underlain by alluvium. Per the consultants, groundwater was not encountered to the maximum depths explored and historically highest groundwater is about 80 to 90 feet below the ground surface. The site is relatively level.

The consultants recommend to support the proposed structure on conventional foundations bearing in native undisturbed competent alluvium soil found at and below a depth of 10 feet. The consultants recommend to support the proposed small outlying structures, such as block walls up to 6 feet in height and planter walls or trash enclosures not tied to the proposed structure, on conventional foundations bearing in native undisturbed alluvial soils and/or properly placed fill.

The referenced report is acceptable, provided the following conditions are complied with during site development:

(Note: Numbers in parenthesis () refer to applicable sections of the 2017 City of LA Building Code. P/BC numbers refer the applicable Information Bulletin. Information Bulletins can be accessed on the internet at LADBS.ORG.)

LADBS G-5 (Rev.11/23/2016) AN EQUAL EMPLOYMENT OPPORTUNITY - AFFIRMATIVE ACTION EMPLOYER

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1. Approval shall be obtained from the Department of Public Works, Bureau of Engineering, Development Services and Permits Program for any proposed removal of support and/or retaining of slopes adjoining to public way (3307.3.2).

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- 2. Approval shall be obtained from the Metropolitan Transportation Authority (MTA) for the proposed development and potential surcharges on the existing MTA structures and tunnels.
- 3. In the event tie-back anchors are utilized for shoring purposes, then provide a notarized letter from all adjoining property owners allowing tie-back anchors on their property (7006.6).
- 4. The soils engineer shall review and approve the detailed plans prior to issuance of any permit. This approval shall be by signature on the plans that clearly indicates the soils engineer has reviewed the plans prepared by the design engineer; and, that the plans included the recommendations contained in their reports (7006.1).
- 5. All recommendations of the report that are in addition to or more restrictive than the conditions contained herein shall be incorporated into the plans.
- 6. A copy of the subject and appropriate referenced reports and this approval letter shall be attached to the District Office and field set of plans (7006.1). Submit one copy of the above reports to the Building Department Plan Checker prior to issuance of the permit.
- 7. A grading permit shall be obtained for all structural fill and retaining wall backfill (106.1.2).
- 8. Prior to the issuance of any permit, an accurate volume determination shall be made and included in the final plans, with regard to the amount of earth material to be exported from the site. For grading involving import or export of more than 1000 cubic yards of earth materials within the grading hillside area, approval is required by the Board of Building and Safety. Application for approval of the haul route must be filed with the Board of Building and Safety Commission Office. Processing time for application is approximately 8 weeks to hearing plus 10-day appeal period.
- 9. All man-made fill shall be compacted to a minimum 90 percent of the maximum dry density of the fill material per the latest version of ASTM D 1557. Where cohesionless soil having less than 15 percent finer than 0.005 millimeters is used for fill, it shall be compacted to a minimum of 95 percent relative compaction based on maximum dry density. Placement of gravel in lieu of compacted fill is only allowed if complying with LAMC Section 91.7011.3.
- 10. If import soils are used, no footings shall be poured until the soils engineer has submitted a compaction report containing in-place shear test data and settlement data to the Grading Division of the Department; and, obtained approval (7008.2).
- 11. Compacted fill shall extend beyond the footings a minimum distance equal to the depth of the fill below the bottom of footings or a minimum of three feet, whichever is greater, except at locations where lateral over excavation is not possible (i.e., foundations adjacent

Page 3 119 & 121 S. Soto Street // 2316 & 2324 E. 1st Street

to property lines or structures), in which case the foundations may be deepened to bear in native soils, as recommended (7011.3).

- 12. Existing uncertified fill shall not be used for support of footings, concrete slabs or new fill (1809.2, 7011.3).
- 13. Drainage in conformance with the provisions of the Code shall be maintained during and subsequent to construction (7013.12).
- 14. Grading shall be scheduled for completion prior to the start of the rainy season, or detailed temporary erosion control plans shall be filed in a manner satisfactory to the Grading Division of the Department and the Department of Public Works, Bureau of Engineering, B-Permit Section, for any grading work in excess of 200 cubic yards (7007.1).

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- 15. All loose foundation excavation material shall be removed prior to commencement of framing (7005.3).
- 16. Controlled Low Strength Material, CLSM (slurry), if proposed to be used shall satisfy the requirements specified in P/BC 2014-121.
- 17. The applicant is advised that the approval of this report does not waive the requirements for excavations contained in the General Safety Orders of the California Department of Industrial Relations (3301.1).
- 18. Temporary excavations that remove lateral support to the public way, adjacent property, or adjacent structures shall be supported by shoring, as recommended. Note: Lateral support shall be considered to be removed when the excavation extends below a plane projected downward at an angle of 45 degrees from the bottom of a footing of an existing structure, from the edge of the public way or an adjacent property. (3307.3.1)
- 19. Prior to the issuance of any permit that authorizes an excavation where the excavation is to be of a greater depth than are the walls or foundation of any adjoining building or structure and located closer to the property line than the depth of the excavation, the owner of the subject site shall provide the Department with evidence that the adjacent property owner has been given a 30-day written notice of such intent to make an excavation (3307.1).
- 20. The soils engineer shall review and approve the shoring plans prior to issuance of the permit (3307.3.2).
- 21. Prior to the issuance of the permits, the soils engineer and/or the structural designer shall evaluate the surcharge loads used in the report calculations for the design of the retaining walls and shoring. If the surcharge loads used in the calculations do not conform to the actual surcharge loads, the soil engineer shall submit a supplementary report with revised recommendations to the Department for approval.
- 22. Unsurcharged temporary excavation may be cut vertical up to 5 feet. Excavations over 5 feet and up to a maximum height of 12 feet shall be trimmed back at a uniform gradient not exceeding 1:1, from top to bottom of excavation, as recommended on page 25 of the 04/16/2018 report.

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- 23. Shoring shall be designed for the lateral earth pressures specified in the section titled "Shoring – Soldier Pile Design and Installation" starting on page 25 of the 04/16/2018 report; all surcharge loads shall be included into the design.
- 24. Shoring shall be designed for a maximum lateral deflection of 1 inch, provided there are no structures within a 1:1 plane projected up from the base of the excavation. Where a structure is within a 1:1 plane projected up from the base of the excavation, shoring shall be designed for a maximum lateral deflection of ½ inch, or to a lower deflection determined by the consultant that does not present any potential hazard to the adjacent structure.
- 25. A shoring monitoring program shall be implemented to the satisfaction of the soils engineer.
- 26. In the event shoring soldier beams/piles are installed using vibrating/driving equipment in the vicinity of existing structures, the following conditions shall be complied with:
  - a. Ground vibrations shall be monitored during pile shoring installation adjacent to the pile driving operation.
  - b. Peak particle velocities (PPV) for any single axis shall be limited to ½ inch/second.
  - c. A settlement monitoring program shall be implemented until completion of pile installation.
  - d. In the event any PPV is measured above the specified threshold (½ inch/second) or any settlement is measured/detected, pile driving shall be stopped and corrective actions shall be submitted to the Department for review before resuming pile driving.
- 27. In the event predrilling is needed for shoring pile installation:
  - a. The diameter of the predrilled holes shall not exceed 75 percent of the depth of the web of the I-beam.
  - b. The depth of the predrilled holes shall not exceed the planned excavation depth.
  - c. The auger shall be backspun out of the pilot holes, leaving the soils in place.
- 28. All foundations for the proposed structure shall derive entire support from native undisturbed competent alluvium soil found at and below a depth of 10 feet, as recommended and approved by the soils engineer by inspection.
- 29. Footings for miscellaneous small outlying structures, such as block walls up to 6 feet in height and planter walls or trash enclosures, not to be tied-in to the proposed building, shall derive entire support from native undisturbed alluvial soils and/or properly placed fill soils, as recommended.
- 30. Footings supported on approved compacted fill or expansive soil shall be reinforced with a minimum of four (4), <sup>1</sup>/<sub>2</sub>-inch diameter (#4) deformed reinforcing bars. Two (2) bars shall be placed near the bottom and two (2) bars placed near the top of the footing.

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- 31. The foundation/slab design shall satisfy all requirements of the Information Bulletin P/BC 2014-116 "Foundation Design for Expansive Soils" (1803.5.3). Note: Soils with an Expansion Index greater than 20 are considered to be expansive, in accordance with Section 1803.5.3 of the 2014 LABC.
- 32. Slabs-on-grade shall be at least 5 inches thick and shall be reinforced with <sup>1</sup>/<sub>2</sub>-inch diameter (#4) reinforcing bars spaced a maximum of 16 inches on center each way, as recommended.
- 33. Concrete floor slabs placed on expansive soil shall be placed on a 4-inch fill of coarse aggregate or on a moisture barrier membrane.
- 34. The seismic design shall be based on a Site Class D as recommended. All other seismic design parameters shall be reviewed by LADBS building plan check.
- 35. Retaining walls up to 10 feet in height with a level backfill shall be designed for the lateral earth pressures specified in the section titled "Retaining Wall Design" starting on page 21 of the 04/16/2018 report. All surcharge loads shall be included into the design.
- 36. Retaining walls higher than 6 feet shall be designed for lateral earth pressure due to earthquake motions as specified on page 23 of the 04/16/2018 report (1803.5.12).

Note: Lateral earth pressure due to earthquake motions shall be in addition to static lateral earth pressures and other surcharge pressures. The height of a stacked retaining wall shall be considered as the summation of the heights of each wall.

- 37. All retaining walls shall be provided with a standard surface backdrain system and all drainage shall be conducted in a non-erosive device to the street in an acceptable manner (7013.11).
- 38. With the exception of retaining walls designed for hydrostatic pressure, all retaining walls shall be provided with a subdrain system to prevent possible hydrostatic pressure behind the wall. Prior to issuance of any permit, the retaining wall subdrain system recommended in the soils report shall be incorporated into the foundation plan which shall be reviewed and approved by the soils engineer of record (1805.4).
- 39. Installation of the subdrain system shall be inspected and approved by the soils engineer of record and the City grading/building inspector (108.9).
- 40. Basement walls and floors shall be waterproofed/damp-proofed with an LA City approved "Below-grade" waterproofing/damp-proofing material with a research report number (104.2.6).
- 41. Prefabricated drainage composites (Miradrain, Geotextiles) may be only used in addition to traditionally accepted methods of draining retained earth.
- 42. The structure shall be connected to the public sewer system per P/BC 2017-027.
- 43. All roof, pad and deck drainage shall be conducted to the street in an acceptable manner in non-erosive devices or other approved location in a manner that is acceptable to the LADBS and the Department of Public Works (7013.10).

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- 44. An on-site storm water infiltration system at the subject site shall not be implemented, as recommended.
- 45. All concentrated drainage shall be conducted in an approved device and disposed of in a manner approved by the LADBS (7013.10).
- 46. The soils engineer shall inspect all excavations to determine that conditions anticipated in the report have been encountered and to provide recommendations for the correction of hazards found during grading (7008 & 1705.6).
- 47. Prior to pouring concrete, a representative of the consulting soils engineer shall inspect and approve the footing excavations. The representative shall post a notice on the job site for the LADBS Inspector and the Contractor stating that the work inspected meets the conditions of the report. No concrete shall be poured until the LADBS Inspector has also inspected and approved the footing excavations. A written certification to this effect shall be filed with the Grading Division of the Department upon completion of the work. (108.9 & 7008.2)
- 48. Prior to excavation an initial inspection shall be called with the LADBS Inspector. During the initial inspection, the sequence of construction; shoring; protection fences; and, dust and traffic control will be scheduled (108.9.1).
- 49. Installation of shoring shall be performed under the inspection and approval of the soils engineer and deputy grading inspector (1705.6, 1705.8).
- 50. The installation and testing of tie-back anchors shall comply with the recommendations included in the report or the standard sheets titled "Requirement for Tie-back Earth Anchors", whichever is more restrictive. [Research Report #23835]
- 51. Prior to the placing of compacted fill, a representative of the soils engineer shall inspect and approve the bottom excavations. The representative shall post a notice on the job site for the LADBS Inspector and the Contractor stating that the soil inspected meets the conditions of the report. No fill shall be placed until the LADBS Inspector has also inspected and approved the bottom excavations. A written certification to this effect shall be included in the final compaction report filed with the Grading Division of the Department. All fill shall be placed under the inspection and approval of the soils engineer. A compaction report together with the approved soil report and Department approval letter shall be submitted to the Grading Division of the Department upon completion of the compaction. In addition, an Engineer's Certificate of Compliance with the legal description as indicated in the grading permit and the permit number shall be included (7011.3).

GLEN RAAD Geotechnical Engineer I

Log No. 105284 213-482-0480

cc: Geocon West, Inc., Project Consultant LA District Office Appendix G

Phase I Environmental Site Assessment






Project No. A9622-77-02 May 11, 2018

Jacqueline Monterrosas East Los Angeles Community Corporation 2917 East 1<sup>st</sup> Street Suite 101 Los Angeles, California 90033

#### Subject: PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT 119 AND 121 SOUTH SOTO STREET AND 2316 AND 2322 EAST 1<sup>ST</sup> STREET LOS ANGELES, CALIFORNIA

Dear Ms. Monterrosas:

In accordance with your request and our proposal A9622-77-02 dated May 31, 2017, we have performed a Phase I Environmental Site Assessment (ESA) of the property and improvements at 119 and 121 South Soto Street and 2316 and 2322 East 1<sup>st</sup> Street (the Site) in the City of Los Angeles, California. We performed the Phase I ESA for the East Los Angeles Community Corporation (the Client) to assess the potential for existing hazardous substances and/or petroleum product impacts at the Site prior to entering a lease agreement with for the development of low-income housing at the Site.

This report summarizes the findings of the Phase I ESA including the potential presence of recognized environmental conditions as defined by the American Society for Testing and Materials *Designation* E 1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.

We appreciate the opportunity to have performed this Phase I ESA for the East Los Angeles Community Corporation. Please contact us if you have any questions concerning this report or if we may be of further service.

Sincerely,

GEOCON WEST, INC.

Scott Brito Staff Geologist

Mike Conkle, PG Senior Geologist

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#### PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

#### 1.0 INTRODUCTION

This report summarizes the methodology and presents the findings of a Phase I Environmental Site Assessment (ESA) of the property and improvements at 119 and 121 South Soto Street and the southern approximate 40-feet of 2316 and 2322 East 1<sup>st</sup> Street (the Site) in the City of Los Angeles, California. We performed the Phase I ESA for the East Los Angeles Community Corporation (the Client) to assess the potential for existing hazardous substances and/or petroleum product impacts at the Site prior to the Client entering a lease agreement with Metro for the development of low-income housing.

#### 1.1 **Purpose and Objectives**

The purpose of the Phase I ESA was to identify evidence or indications of 'recognized environmental conditions' (REC) as defined by the American Society for Testing and Materials (ASTM) *Designation E 1527-13 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.* Section 1.1.1 of ASTM *Designation E 1527-13* defines an REC as "the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. De minimis conditions are not recognized environmental conditions." De minimis conditions are those that generally do not present a threat to human health or the environment and that generally would not be the subject of the enforcement action if brought to the attention of appropriate governmental agencies.

ASTM *Designation E1527-13* also defines 'Historical' and 'Controlled' RECs (HREC and CREC, respectively). An 'Historical REC' is defined as "a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to "the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls)." A 'Controlled REC' is defined as "a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls)." An HREC is not an REC if a property meets current standards for unrestricted residential use. A CREC remains an REC by definition when the property does not meet the unrestricted residential use requirement unconditionally.

We also conducted the Phase I ESA in general accordance with the requirements of 40 Code of Federal Regulations (CFR) Part 312 titled *Standards and Practices for All Appropriate Inquiries*, as required under Sections 101(35)(B)(ii) and (iii) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The purpose of conducting an all appropriate inquiries investigation into the previous ownership and uses of a property is to meet the provisions necessary for the landowner, contiguous property owner, and/or bona fide prospective purchaser to qualify for certain landowner liability protections under CERCLA.

The following principles are an integral part of ASTM Designation E1527-13:

- "Uncertainty Not Eliminated No environmental site assessment can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with a property. Performance of this practice is intended to reduce, but not eliminate, uncertainty regarding the potential for recognized environmental conditions in connection with a property, and this practice recognizes reasonable limits of time and cost."
- "*Not Exhaustive* All Appropriate Inquiries does not mean an exhaustive assessment of a property. There is a point at which the cost of information obtained or the time required to gather it outweighs the usefulness of the information and, in fact, may be a material detriment to the orderly completion of transactions. One of the purposes of this practice is to identify a balance between the competing goals of limiting the costs and time demands inherent in performing an environmental site assessment and the reduction of uncertainty about unknown conditions resulting from additional information."
- "*Level of Inquiry is Variable* Not every property will warrant the same level of assessment. Consistent with good commercial and customary practice, the appropriate level of environmental site assessment will be guided by the type of property subject to assessment, the expertise and risk tolerance of the user, and the information developed in the course of the inquiry."

## 1.2 Scope of Services

Our Proposal No. A9622-77-02 dated May 31, 2017 describes the scope of services for this Phase I ESA. We performed the scope of services outlined in the proposal.

The main components of the Phase I ESA and their objectives, as specified by the referenced standards, include the following:

- **Physical Setting**: We reviewed physical setting references to obtain information concerning the topographic, geologic, and hydrogeologic characteristics of the Site and vicinity. Such information may be indicative of the direction and/or extent that a contaminant could migrate in the event of a spill or release.
- **Records Review**: We reviewed publicly available Federal, State, and local regulatory agency records to obtain information that could potentially help identify RECs at or potentially affecting the Site.

- Site History: We reviewed historical references to assess the history of previous uses of the Site and surrounding area to identify those that could have led to RECs on or near the Site. Historical sources reviewed included Sanborn Fire Insurance Maps, aerial photographs, topographic maps, city directories, and previous site assessment reports. In addition, we conducted interviews with persons who were expected to be reasonably knowledgeable about historical and/or current conditions at and uses of the Site.
- **Site Reconnaissance**: We performed a site reconnaissance to observe site conditions and activities for indications of evidence of RECs. The site reconnaissance was for the Site only. Offsite properties and features were viewed solely from the vantage of the Site and public thoroughfares.

#### 1.3 Report Limitations

We prepared this Phase I ESA report exclusively for the Client. The information obtained is only relevant for the dates of the records reviewed or as of the date of the latest site visit. Therefore, the information contained herein is only valid as of the date of the report and will require an update to reflect recent records/site visits.

The Client should recognize that this report is not a comprehensive site characterization and should not be construed as such. The findings and conclusions presented in this report are predicated on the site reconnaissance, a review of the specified regulatory records, and a review of the historical usage of the Site, as presented in this report. The Client should also understand that wetlands, asbestos-containing building materials, lead-containing paint, lead in drinking water, radon, mercury related to mining activities, methane, and mold surveys were not included in the scope of services for this Phase I ESA.

Therefore, the report should only be deemed conclusive with respect to the information obtained. No guarantee or warranty of the results of the report is implied within the intent of this report or any subsequent reports, correspondence or consultation, either express or implied. We strived to conduct the services summarized herein in accordance with the local standard of care in the geographic region at the time the services were rendered.

#### 1.4 Data Gaps

A data gap is defined by ASTM *Designation E 1527-13* as "a lack of or inability to obtain information required by this practice despite good faith efforts by the environmental professional to gather such information." Data gaps could include such things as insufficient historical information, the inability to interview persons with direct site knowledge (e.g., the owner(s), past owner(s), tenants, workers, etc.) or the lack of access to all parts of a site during the site reconnaissance. No data gaps were identified by this Phase I ESA.

## 2.0 SITE DESCRIPTION

This section provides information regarding the location and physical characteristics of the Site including its size, topography, geologic, soil, and hydrogeologic conditions.

## 2.1 Location and Legal Description

The Site comprises two parcels with addresses of 119 and 121 South Soto Street and the southern approximate 40-feet of two parcels with addresses of 2316 and 2322 East 1<sup>st</sup> Street in Los Angeles, California (Figure 1). The Site is depicted on the United States Geological Survey's (USGS) Los Angeles, California, 7.5-minute topographic map (USGS, 1994) in the northeastern quarter of Section 35 of Township 1 South, Range 13 West, San Bernardino Base and Meridian.

The site parcels are further identified by Los Angeles County Assessor's Parcel Number 5183-009-904 (119 S. Soto St.), 5183-009-907 (121 S. Soto St.), 5183-009-905 (2316 E. 1<sup>st</sup> St.), and 5183-009-906 (2322 E. 1<sup>st</sup> St.). A parcel map depicting the Site is in Appendix A.

## 2.2 Site and Vicinity General Characteristics

The approximate 0.8-acre Site is partially developed with a portion of the Metro - Soto Station in its northern portion and is a vacant lot in its southern portion. The Site is surrounded by various commercial businesses and residences (Figure 2). Figure 2 shows the site boundaries and features and surrounding development.

## 2.2.1 Topography

The USGS Los Angeles topographic map (USGS, 1994) shows the Site as relatively flat-lying at an elevation of approximately 300 feet above mean sea level.

## 2.2.2 Geologic Conditions

We reviewed the geologic conditions of the Site and surrounding area on the *Geologic Map of the Los Angeles Quadrangle* (California Division of Mines and Geology [CDMG], 1969), and *Note 36, California Geomorphic Provinces* (California Geological Survey [CGS] 2002). The Site is located in the northwestern Los Angeles Basin of the Peninsular Ranges geomorphic province of California. The Los Angeles Basin is a tectonically active sedimentary basin with elongate low ridges and hills on the edge of the Pacific Plate and south of the Transverse Ranges. The Los Angeles Basin is filled with a sequence of Cretaceous to Recent-age sedimentary deposits both continental and marine in origin.

The referenced geologic map indicates that the Site is underlain by Pleistocene-age nonmarine deposits. These nonmarine deposits generally consists of consolidated, discontinuous, interbedded layers of clay, silt, sand and gravel deposited by rivers and streams emanating from the Transverse Ranges.

## 2.2.3 Soil Conditions

We obtained information concerning soil conditions in proximity to the Site from the United States Department of Agriculture – Natural Resources Conservation Service Web Soil Survey Web Soil Survey (http://websoilsurvey.nrcs.usda.gov/ app/HomePage.htm). Web Soil Survey information indicates that surficial onsite soil is classified as Urban Land-Azuvina Montebello Complex and Urban Land-Montebello Complex.

Urban Land-Azuvina Montebello Complex is a fine sandy loam to loam that formed on fan remnants derived from discontinuous human-transported material over old (granite) alluvium. Urban Land-Montebello Complex is a sandy clay loam to fine sandy loam that formed on fan remants derived from human-transported material over old (granite) alluvium. The "urban land" component indicates that the onsite soils were likely altered during construction by grading and excavation and are generally covered by development.

# 2.2.4 Hydrologic and Hydrogeologic Conditions

Site-specific information regarding groundwater occurrence and flow direction is not available. Therefore, to assess local groundwater conditions for the site vicinity we reviewed reports available on the California State Water Resources Control Board GeoTracker website (http://geotracker.waterboards.ca.gov) for groundwater information at the nearest facility with a groundwater monitoring array such as leaking underground storage tank (LUST) facilities or other agency-regulated cleanup sites. The nearest such facility is Marlene's Muffler Shop Former Service Station (T0603700848) at 2239 East 1<sup>st</sup> Street, approximately 700 feet northwest of the Site. Depth to groundwater measured in nine groundwater monitoring wells at and within the vicinity of this facility ranged from 31.48 to 35.51 feet in October 2013 (Ami Adini & Associates, Inc., 2013). Groundwater flow beneath this facility was calculated to be to the west-southwest.

## 2.3 Current and Planned Uses of the Site

The northern portion of the Site (1<sup>st</sup> Street parcels) is part of the Metro – Soto Station. The southern portion of the Site (South Soto Street parcels) is currently a gated vacant lot occasionally used for parking by Metro. The Client plans to develop multi-family residential structures at the Site.

## 2.4 Descriptions of Structures, Roads, Other Improvements on the Site

The northern portion of the Site (1<sup>st</sup> Street parcels) is a portion of a concrete paved "waiting area" for the Metro - Soto Station with benches, bicycle lockers, exterior lights, and a landscaped area. The southern portion of the Site (South Soto Street parcels) is an unpaved vacant lot. Further description of site conditions is in Section 6.0.

## 2.5 Current Uses of Adjoining Properties

Adjoining properties include other portions of the Metro – Soto Station to the northeast, S. Soto Street and single-family residences to the southeast, single-family residences to the southwest, and an alley to the northwest side beyond which are commercial properties and residences. Further description of adjoining properties is in Section 6.0.

#### 3.0 USER-PROVIDED INFORMATION

This section summarizes user (Client)-provided information regarding the Site provided by Jacqueline Monterrosas. We asked Ms. Monterrosas if she knew of previous environmental reports or documents that may exist and, if so, whether copies could be provided. We also asked if she had knowledge of legal or administrative proceedings involving the Site. Ms. Monterrosas completed a User Questionnaire regarding these items, a copy of which is in Appendix B.

#### 3.1 Title, Appraisal and Sale Agreement Records

A preliminary title report for the Site was not provided for review.

#### 3.2 Environmental Liens or Activity and Use Limitations

Ms. Monterrosas indicated that she was not aware of any environmental liens or activity and use limitations for the Site.

#### 3.3 Specialized Knowledge

Ms. Monterrosas indicated that there is record of an underground clarifier on the adjacent property to the north near the site boundary that may impact redevelopment plans. She is unsure if the clarifier has been removed. A figure showing the location of the clarifier is included in Appendix B.

## 3.4 Commonly Known or Reasonably Ascertainable Information

Ms. Monterrosas stated that the Site has historically been under residential use.

#### 3.5 Valuation Reduction for Environmental Issues

Ms. Monterrosas indicated that the appraised value has yet to be determined.

#### 3.6 Owner, Property Manager, and Occupant Information

Metro is the owner of the Site. We interviewed Andrew Quinn, a Metro representative, regarding his knowledge of the Site and surrounding properties. Information from Mr. Quinn's interviews are summarized in Section 7.0.

#### 3.7 Reason for Performing Phase I ESA

The Client requested the Phase I ESA to obtain information regarding the potential for existing hazardous substances and/or petroleum product impacts at the Site prior to entering a lease agreement with Metro for the development of low-income housing.

#### 4.0 RECORDS REVIEW

This section summarizes information we obtained through review of readily available agency records for the Site and properties and facilities in the surrounding vicinity.

#### 4.1 Standard Environmental Record Sources

Environmental Data Resources, Inc. (EDR) searched federal, state, and local environmental databases for listings pertaining to the Site and properties/facilities within 1 mile of the Site. The following table shows the databases that list the Site and/or offsite properties/facilities and the total number of listed properties/facilities for each database. *The EDR Radius Map Report with GeoCheck*, dated June 14, 2017, is in Appendix C and provides a comprehensive listing of the databases searched.

Database Name	Search Radius (Miles)	Number of Listings
FEDERAL DATABASES		
Resource Conservation and Recovery Act [RCRA] – Small Quantity Generators (RCRA-SQG)	0.25	8
STATE, LOCAL, AND TRIBAL DATABA	SES	
Department of Toxic Substances Control [DTSC] Site Mitigation and Brownfields Reuse Program (ENVIROSTOR)	1.0	3
Leaking Underground Storage Tank (LUST)	0.5	10
Underground Storage Tank (UST)	0.25	4
ADDITIONAL ENVIRONMENTAL RECO	ORDS	
Recycler Database (SWRCY)	0.5	2
Statewide Environmental Evaluation and Planning System UST Listing (SWEEPS UST)	0.25	7
Historical UST Properties/Facilities (HIST UST)	0.25	5
Facility Inventory Database (CA FID UST)	0.25	7
RCRA - Non Generators / No Longer Regulated (RCRA NonGen / NLR)	0.25	1
Cleaner Facilities (DRYCLEANERS)	0.25	1
Facility and Manifest Data (HAZNET)	0.001	2*
Hazardous Waste & Substance Site List (HIST CORTESE)	0.5	3
EDR HIGH RISK HISTORICAL RECOR	RDS	
EDR Exclusive Historic Gas Stations (EDR Hist Auto)	0.125	6
EDR Exclusive Historic Dry Cleaners (EDR Hist Cleaner)	0.125	9
* Indicates that the Site is listed in the database.		

#### 4.1.1 Site

The site address 2322 E. 1<sup>st</sup> Street is listed on the HAZNET database as "Soto Station" for removing approximately 500 tons of contaminated soil from the Site in 2004 and 2005. No other pertinent information is provided. The soil was removed during the construction of the Metro subway tunnel and station.

The site address 2318 E. 1<sup>st</sup> Street is listed on the EDR Hist Cleaner database as "Sun Chew", which operated onsite in 1937. This address, which was previously for a portion of the Site between the current addresses of the two 1<sup>st</sup> Street parcels, may have historically been assigned to a portion of one of the 1<sup>st</sup> Street parcels that were redeveloped with the construction of the Soto Station. No other pertinent information about this former cleaner is listed on this database.

## 4.1.2 Offsite Properties

Eighteen properties within 1/8 mile of the Site are listed on various non-release-related databases<sup>1</sup> and therefore are unlikely to have caused an REC at the Site except for the following:

<u>**Guadalajara Auto Sales, 111 South Soto Street**</u> – this former facility was adjacent to the northeast of the Site. It is listed on the UST, SWEEPS UST, HIST UST, and the CA FID UST databases. Three 10,000-gallon gasoline underground storage tanks (USTs) are listed for this former facility. The UST and CA FID UST listings provide no pertinent information. Due to its proximity to the Site, an unknown release at this former gas station could have impacted soil vapor and/or groundwater beneath the Site and therefore represents a potential environmental concern. However, this facility was located on the property that has been developed with the Soto Station. The extensive excavation that was performed during construction likely would have encountered and removed any USTs and potential soil contamination related to the USTs. Construction would likely not have had an effect on groundwater.

**Endlich EDW – 2332 East 1<sup>st</sup> Street** – this former facility was adjacent to the northeast of the Site. It is listed on the EDR Hist Auto database as a "gasoline and oil service station", "automobile repairing" or "automobile service station" from 1924 to 1942. No other pertinent information about this former gas station is provided. Due to its proximity to the Site, an unknown release at this former gas station could have impacted soil vapor and/or groundwater beneath the Site and therefore represents a potential environmental concern. However, this facility was located on the property that has been developed with the Soto Station. The extensive excavation that was performed during construction likely would have encountered and removed any USTs and potential soil contamination related to the

<sup>&</sup>lt;sup>1</sup> "Release" refers to an unauthorized release of a petroleum product or hazardous substance to the environment i.e. the ground surface, soil, soil vapor, groundwater, or surface water on a property. "Release-related database" refers to those which provide information regarding an unauthorized release. "Non-release-related database" refers to those that may report use, storage, or disposal of hazardous substances and/or petroleum products or other environmental conditions, but do not report releases of such.

USTs. Construction would likely not have had an effect on groundwater.

**Fisher A H** – **2336 East 1<sup>st</sup> Street** – this former facility was adjacent to the northeast of the Site. It is listed as a "gasoline and oil service station" in 1942 on the EDR Hist Auto database. No other pertinent information about this former gas station is provided. Due to its proximity to the Site, an unknown release at this former gas station could have impacted soil vapor and/or groundwater beneath the Site and therefore represents a potential environmental concern. However, this facility was located on the property that has been developed with the Soto Station. The extensive excavation that was performed during construction likely would have encountered and removed any USTs and potential soil contamination related to the USTs. Construction would likely not have had an effect on groundwater.

The following table summarizes information regarding properties less than 1/4 mile from the Site that are listed on one or more release-related databases, the status of their listings, and their potential, if any, to cause (or have caused) an REC at the Site.

Business	Address	Approximate Distance from the Site	Database	Pertinent Information/Potential to Impact the Site
Marlene's Muffler Shop Former Service Station	2239 East 1 <sup>st</sup> Street	700 feet west- northwest (cross-gradient)	LUST	This facility is listed on the LUST database for a release that affected only soil with gasoline. The Los Angeles Regional Water Quality Control Board (RWQCB) closed the LUST case in October 2015. Based on the closure of the case and that only soil was affected, the release is unlikely to have caused an REC at the Site.
LAPD – Hollenbeck Garage	2111 East 1 <sup>st</sup> Street	750 feet west- northwest (cross-gradient)	LUST, SWEEPS UST, HIST UST, UST, CA FID UST	This facility is listed on the LUST database for a release that affected only soil with gasoline. The City of Los Angeles (the City) closed the LUST case in January 2012. Based on the closure of the case and that only soil was affected, the release is unlikely to have caused an REC at the Site. The SWEEPS UST and HIST UST databases list four USTs. The UST and CA FID UST databases provide no pertinent information. database.
Winall #1	401 South Soto Street	1,030 feet south- southwest (cross-gradient)	LUST, SWEEPS UST, HIST UST, UST, CA FID UST	This facility is listed on the LUST database for a release that affected groundwater with gasoline. The case is currently open. Groundwater flow is cross gradient at the facility with respect to the Site. Based on its distance

Business	Address	Approximate Distance from the Site	Database	Pertinent Information/Potential to Impact the Site
				from the Site and the direction of groundwater flow reported for this facility (northwest), the release at this facility is unlikely to have caused an REC at the Site.
				The SWEEPS UST database lists one UST.
				The UST and CA FID UST databases provide no pertinent information. database.
Shell Service Station	400 South	1,030 feet south- southwest	LUST, SWEEPS UST, RCRA-SQG,	This facility is listed on the LUST database for a release that affected groundwater with gasoline The RWQCB closed the LUST case in September 2012. Based on the closure of the case and its distance from the Site, the release at this facility is unlikely to have caused an REC at the Site The SWEEPS UST database lists four
(Former)	Solo Sheet	(cross-gradient)	UST, CA FID UST	USTs. The RCRA-SQG database lists generation of benzene and ignitable waste. No violations are reported.
				The UST and CA FID UST databases provide no pertinent information. database.

## 4.2 Orphan Summary

The Orphan Summary identifies facilities that have incomplete address information and could not be specifically plotted. The Orphan Summary lists two properties that are greater than 4,500 feet from the Site. Based on their distance from the Site, none of these properties are expected to have caused an REC at the Site.

## 4.3 Other Environmental Record Sources

## 4.3.1 GeoTracker and EnviroStor

We reviewed information available on GeoTracker and the California Department of Toxic Substances Control's (DTSC) EnviroStor (<u>http://www.envirostor.dtsc.ca.gov/public/</u>) database for information regarding environmental assessment and cleanup at the Site and/or properties/facilities within <sup>1</sup>/<sub>4</sub> mile of the Site. No information for the Site is available on GeoTracker. No information for the Site or properties/facilities within 1/4 mile of the Site is available on EnviroStor. The following offsite properties or facilities are listed on GeoTracker:

- Marlene's Muffler Shop Former Service Station (2239 East 1st Street),
- LAPD Hollenbeck Garage (2111 East 1st Street),
- Winall #1 (401 South Soto Street), and
- Shell Service Station (Former) (400 South Soto Street),

The information obtained from various regulatory databases for these facilities summarized in Section 4.1.2 is also available on GeoTracker, with the following additions:

• <u>Marlene's Muffler Shop Former Service Station (2239 East 1st Street)</u>

Both EDR and GeoTracker indicate that this was a soil-only case completed as of 10/27/2015. However, the most recent groundwater monitoring report on GeoTracker (Ami Adini & Associates, Inc., 2013) indicates that groundwater has also been affected by gasoline. The former service station is located west-northwest of the Site, and local groundwater flow direction is reported to be to the west-southwest, which suggests that the release at this facility is unlikely to have reached and caused an REC at the Site.

• <u>Winall #1 (401 South Soto Street).</u>

This former service station is an open case with the potential for gasoline to effect soil and groundwater. The most recent groundwater monitoring report on GeoTracker (Economy Environmental, Inc., 2017) indicates that there are seven wells on this facility, six of which contain free product. Additionally, the extent of the groundwater plume is not defined. This facility is located southwest of the Site. Local groundwater flow direction at this facility is reported as being to the northwest, which suggests that the release at this facility is unlikely to have caused an REC at the Site.

## 4.3.2 City of Los Angeles Fire Department

We searched the City of Los Angeles Fire Department's (LAFD) website (<u>www.lafd.org/publicrecords</u>) for available records pertaining to the Site and for adjacent properties 111 South Soto Street and 2332 and 2316 East 1<sup>st</sup> Street. We did not find any records pertaining to the Site or adjacent properties 2332 and 2336 East 1<sup>st</sup> Street on LAFD's website.

We did find UST and hazardous material records for 111 South Soto Street on LAFD's website. We sent a request to LAFD to review these records. According to the inventory maintained by LAFD, this facility maintained three 10,000-gallon gasoline USTs and one 400-gallon waste oil UST. LAFD does not have records of the removal of these USTs.

## 4.3.3 Los Angeles County Public Works Department

We submitted a request to the Los Angeles County Public Works Department (LAPWD) for records pertaining to the Site and for adjacent properties 111 South Soto Street and 2332 and 2316 East 1<sup>st</sup> Street. We have yet to receive a response from them. If the LAPWD provides any pertinent information pertaining to these addresses, we will summarize that information in an addendum to this report.

# 4.3.4 DOGGR

We reviewed the State of California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR) online mapping system for information regarding the location and status of any oil or natural gas exploration or production at or in the vicinity of the Site. The DOGGR online mapping system shows three plugged oil and gas wells approximately 1,350 feet southwest of the Site (DOGGR, 2017). Based on their plugged status and distance from the Site, these former wells are unlikely to have caused an REC at the Site.

## 5.0 HISTORICAL USE

We evaluated the historical use of the Site and adjacent properties through review of Sanborn Fire Insurance Maps (Sanborn maps), historical aerial photographs, historical topographic maps, and city directories provided by EDR. This section summarizes the information obtained from these sources.

#### 5.1 Sanborn Fire Insurance Maps

We reviewed Sanborn maps for the years 1888, 1890, 1894, 1906, 1921, 1949, and 1970 (Appendix D) to obtain information pertaining to historical development and uses of the Site. The following table summarizes information on the maps for the Site and nearby properties.

Voar	Observations			
i cai	Site	Adjacent Properties		
1888	No structures or land uses are depicted on the Site.	No structures or land uses are depicted on the adjacent properties. East 1 <sup>st</sup> Street is depicted north of the Site.		
1890	Conditions are similar to those depicted on the 1888 map	Conditions are similar to those depicted on the 1888 map except for dwellings depicted northeast of the Site beyond East 1 <sup>st</sup> Street and southwest of the Site, and South Soto Street depicted east of the Site.		
1894	Conditions are similar to those depicted on the 1890 map	Conditions are similar to those depicted on the 1890 map.		
1906	Two dwellings and a stable are depicted on the Site.	Dwellings are depicted on the adjacent properties and the properties beyond East 1 <sup>st</sup> Street and South Soto Street.		
1921	Five dwellings, a shed, and an automobile outbuilding are depicted on the Site.	Dwellings and a store are depicted north of the Site beyond East 1 <sup>st</sup> Street. Dwellings and an automobile repair shop are adjacent to the northeast of the Site. Stores are depicted northeast of the Site beyond East 1 <sup>st</sup> Street. Dwellings, apartments, and stores are depicted east of the Site beyond South Soto Street. Dwellings with various outbuildings are depicted south, southeast, and east of the Site.		
1949	Eight dwellings, a shed, two automobile outbuildings, a restaurant, a store, and a candy manufacturing shop are depicted on the Site.	Additional stores and dwellings are depicted north and northeast (beyond East 1 <sup>st</sup> Street), east (beyond South Soto Street), south, southwest, and west of the Site. A restaurant is depicted northeast of the Site beyond East 1 <sup>st</sup> Street. Two dwellings, an automobile repair shop, a tire & battery shop, and a gas station are adjacent to the northeast of the Site.		
1970	Conditions are similar to those depicted on the 1949 map except for two stores and a bakery are depicted in the northern portion of the Site.	Conditions are similar to those depicted on the 1945 map except for the following. Two "iron" structures are depicted adjacent to the northeast of the Site. The automobile repair shop, tire & battery shop, and gas station are not depicted northeast of the Site. Additional stores and a commercial structure are depicted north of the Site beyond East 1 <sup>st</sup> Street.		

The Sanborn maps do not depict features or land uses that directly suggest the presence of RECs on the Site. A gas station and an automobile repair shop are depicted approximately 50 feet northeast of the Site, the location of the Soto Station, on the 1949 map, which are considered a potential environmental concern.

## 5.2 Aerial Photographs

We reviewed historical aerial photographs for the years 1923, 1928, 1938, 1948, 1952, 1964, 1972, 1977, 1983, 1989, 1994, 2002, 2005, 2009, 2010, 2012 (Appendix E) for indications of past land uses that had the potential to have impacted the Site through the use, storage or disposal of hazardous substances and/or petroleum. The following table summarizes our observations of the Site and adjacent properties on the aerial photographs.

Veer	Observations				
Tear	Site	Adjacent Properties			
1923 (1'' = 500')	Five residences with a few outbuildings were present on the Site.	Residences and commercial structures were north and northeast of the Site beyond East 1 <sup>st</sup> Street and east of the Site beyond South Soto Street. Two residences and a commercial structure were adjacent to the northeast of the Site. Residences were south and southwest of the Site. Residences and commercial structures were west of the Site.			
1928 (1'' = 500')	The resolution of the photograph is poor; however, it appears conditions were similar to those observed on the 1923 photograph except for a commercial structure in the northern portion of the Site.	The resolution of the photograph is poor; however it appears conditions were similar to those observed on the 1923 photograph.			
1938 (1" = 500')	Conditions were similar to those observed on the 1928 photograph except for additional structures in the northern and southwestern portions of the Site.	Conditions were similar to those observed on the 1928 photograph except that a newer commercial structure was adjacent to the northeast of the Site.			
1948 (1" = 500')	The resolution of the photograph is poor; however it appears conditions were similar to those observed on the 1938 photograph.	The resolution of the photograph is poor; however it appears conditions were similar to those observed on the 1938 photograph.			
1952 (1" = 500')	Conditions were similar to those observed on the 1948 photograph.	Conditions were similar to those observed on the 1948 photograph.			
1964 (1" = 500')	Conditions were similar to those observed on the 1952 photograph.	Conditions were similar to those observed on the 1952 photograph except newer commercial structures were adjacent to the northeast of the Site and north and northeast of the Site beyond East 1 <sup>st</sup> Street.			
1972 and 1977 (1" = 500')	Conditions were similar to those observed on the 1964 photograph.	Conditions were similar to those observed on the 1964 photograph.			
1983 and 1989 (1" = 500')	Conditions were similar to those observed on the 1972 and 1977 photographs.	Conditions were similar to those observed on			

Veen	Observations			
rear	Site	Adjacent Properties		
		the 1972 and 1977 photographs.		
1994 (1" = 500')	Conditions were similar to those observed on the 1983 and 1989 photographs.	Conditions were similar to those observed on the 1983 and 1989 photographs.		
2002 (1" = 500')	Conditions were similar to those observed on the 1994 photograph.	Conditions were similar to those observed on the 1994 photograph.		
2005 (1'' = 500')	The Site was a vacant lot.	Conditions were similar to those observed on the 2002 photograph except for a vacant lot adjacent to the northeast of the Site.		
2009 (1'' = 500')	The northern portion of the Site was part of the Metro – Soto Station (under construction). The southern portion of the Site appears to have been used as a construction staging area.	Conditions were similar to those observed on the 2005 photograph except for Metro – Soto Station under construction adjacent to the northeast of the Site.		
2010 and 2012 (1" = 500')	The northern portion of the Site was part of the Metro - Soto Station. The southern portion of the Site was a vacant lot.	Conditions were similar to those observed on the 2009 except for the Metro – Soto Station adjacent to the northeast of the Site.		

No land uses that would suggest the presence of RECs are visible on the Site or adjacent properties in the aerial photographs.

## 5.3 Topographic Maps

We reviewed historical topographic maps for the years 1894, 1896, 1900, 1926, 1928, 1953, 1966, 1972, 1981, and 2012 (Appendix F). The following table summarizes our observations of the Site and adjacent properties on the historical topographic maps.

Voor	Observations				
Tear	Site	Adjacent Properties			
1894 and 1896 (1: 62,500)	No structures or land uses are depicted on the Site.	Structures are depicted north (beyond East 1 <sup>st</sup> Street), east (beyond South Soto Street), south, and west of the Site.			
1900 (1: 62,500)	Similar to conditions depicted on the 1894 and 1896 maps.	Similar to conditions depicted on the 1894 and 1896 maps.			
1926 and 1928 (1:24,000)	Two structures are depicted on the Site.	Similar to conditions depicted on the 1900 map except for additional structures north, east, south, and west of the Site.			
1953 (1: 24,000)	Coloring depicts the Site as being in a "developed area."	Coloring depicts the adjacent properties as being in a "developed area."			
1966 (1: 24,000)	Similar to conditions depicted on the 1953 map.	Similar to conditions depicted on the 1953 map.			
1972 (1: 24,000)	Similar to conditions depicted on the 1966 map.	Similar to conditions depicted on the 1966 map.			
1981 (1: 24,000)	Similar to conditions depicted on the 1972 map.	Similar to conditions depicted on the 1972 map.			
1994 (1: 24,000)	Similar to conditions depicted on the 1981 map.	Similar to conditions depicted on the 1981 map.			
2012 (1:24,000)	No structures or land uses are depicted on the Site.	No structures or land uses are depicted on the adjacent properties.			

The topographic maps do not depict features or land uses that directly suggest the presence of RECs on the Site or adjacent properties.

## 5.4 City Directories

EDR prepared an abstract of city directories including city, cross reference and telephone directory listings (Appendix G). EDR included information from directories at approximate 5-year intervals, if available, from 1920 to 2014. Individual homeowners are listed for the site addresses from 1924 to 2006.Two bakeries are listed for a former site address, 2318 East 1<sup>st</sup> Street. Acapulco Bakery is listed on the directories from 1971 to 1990 and Saldanas Bakery is listed on the 1962 directory.

Becerra Gas Station (1986 and 1990), Gulf Oil Service Stns (1967 and 1981), and Soto Gas Stn Inc (1962) are listed for the property at 111 South Soto Street, adjacent to the northeast of the Site. The other adjacent properties listed in the city directories report consist of various commercial businesses none of which suggest the storage or use of hazardous substances or petroleum products.

#### 6.0 SITE RECONNAISSANCE

This section summarizes our observations of the Site and surrounding properties made during the site reconnaissance.

#### 6.1 Methodology and Limiting Conditions

Mike Conkle, Senior Geologist with Geocon, performed a site reconnaissance on December 15, 2017. Mr. Conkle performed the site reconnaissance by walking throughout the Site and along the site perimeter to observe site features and conditions. The offsite survey was performed by making observations of adjacent properties from the Site and public roads.

Weather on the day of the site reconnaissance was sunny with temperatures in the 70s°F. Photos of various site features and offsite properties are appended.

## 6.2 Site Setting

The Site is situated in downtown Los Angeles surrounded by various commercial businesses and residential developments.

#### 6.3 Onsite Survey

The L-shaped Site comprises four parcels. The northern portion of the Site, which occupies the southern approximately 40-feet of the two parcels with E. 1<sup>st</sup> Street addresses, is a concrete paved plaza for the Metro - Soto Station. This portion of the Site is developed with concrete paving, benches, bicycle lockers, exterior lights, and a landscaped area (Photo 1). A service elevator for the Metro is just north of the northern site boundary along the northwestern edge of the 2316 E. 1<sup>st</sup> Street parcel (Photo 2).

The southern portion of the Site (the two S. Soto Street parcels) is an unpaved vacant lot sparsely vegetated with sporadic patches of grass (Photo 3). A cinder block wall, separating the lot from the Soto Station is present along the northeastern edge of this portion of the Site (Photo 4). The remainder of this portion of the Site is bounded by chain-link fencing. A locked chain-link gate located on the southeastern end of this portion of the Site restricts access to the lot. At the time of the site reconnaissance, this portion of the Site was vacant with the exception of some construction materials (lumber and metal ducting) located along the fence along the northwestern side (Photo 5).

We observed no evidence of RECs on the Site.

## 6.4 Offsite Survey

Adjacent properties consist of the following:

- Northeast The entrance to the Metro Soto Station is located to the northeast of the Site, within the crook of the L formed by the Site (Photo 6 and 7). Subsurface features including train boarding platforms and track tunnels are present to the northeast of the Site. To the northeast across 1<sup>st</sup> Street are a variety of restaurants, stores, and bars (Photo 8)
- Northwest Commercial properties fronting 1<sup>st</sup> Street are present to the northwest of the E. 1<sup>st</sup> Street parcels. Residential properties are located to the northwest of the Soto Street properties.
- Southwest Residential properties are present beyond the alley to the southwest of the Site.
- Southeast Residential properties are present to the southeast of the Site, across Soto Street. (Photo 9).

We observed no evidence of RECs on the properties adjacent to Site.

#### 7.0 INTERVIEWS

We interviewed Mr. Quinn with Metro for information regarding past and present use of the Site and the potential for impacts related to the use, storage, or disposal of hazardous substances and/or petroleum products on the Site. We also provided Mr. Quinn with a site owner questionnaire regarding the use, storage, or disposal of hazardous substances and/or petroleum products on the Site. A copy of the site owner questionnaire is in Appendix H.

Mr. Quinn stated that the Metro has owned the Site since 2002 when it was acquired and developed as part of a subway extension. The subway was completed and opened for service in November 2015. Mr. Quinn indicated that during construction the Site was used as a parking lot. Mr. Quinn indicated that the S. Soto Street parcels of the Site were previously used for residential purposes and that to the best of his knowledge there have not been hazardous substances or petroleum products used or stored on the Site.

Mr. Quinn indicated that the properties now occupied by the Soto Station previously contained auto repair and service stations. We asked Mr. Quinn for records pertaining to the removal of the 500 tons of contaminated soil reported on the HAZNET database, and the possible removal of USTs from the former business operated by Guadalajara Auto Sales, Endlich EDW, and Fisher AH during construction of the station. He indicated that he would look for records of UST removal or remedial efforts that were performed by Metro during construction of the station.

In a follow up phone conversation on May 4, 2018 Mr. Quinn stated that he had reviewed Metro's files and inquired with various Metro employees regarding the environmental issues encountered during the construction of the Soto Station. Mr. Quinn indicated the following:

- Metro does not have records of UST removals that may have occurred during construction of the Soto Station, although he surmised that if USTs were present they would have to have been removed during construction.
- Metro is aware of the 500 tons of contaminated soil that were removed during construction of the Soto Station. They do not have records indicating the source of the contamination or the specific location at which it was encountered. Documentation that the limits of the contaminated soil was identified and removed are not available. Mr. Quinn indicated that it is possible that contaminated soil may still be present in areas of the Soto Station property that are outside of the limits of the excavation that was performed during construction.
- The clarifier shown on plans to be present near the northeastern corner of the Client's proposed development was searched for during construction of the Soto Station. Metro was unable to locate the clarifier and they are of the opinion that it does not exist.

## 8.0 CONCLUSIONS AND RECOMMENDATIONS

We have performed a Phase I ESA, in general conformance with the scope and limitations of ASTM *Designation E 1527-13* of the property and improvements at 119 and 121 South Soto Street and 2316 and 2322 East 1<sup>st</sup> Street in the City of Los Angeles, California. Exceptions to, or deletions from, this practice are described in Section 1.4 of this report.

The Phase I ESA has revealed no evidence of RECs in connection with the Site. However, we identified the following potential environmental concern:

There are records indicating USTs were present on one or more portions of the adjacent property to the north now occupied by the Metro Soto Station. There are also records indicating that contaminated soil was removed during the construction of the Soto Station. It is unknown if the soil removal was associated with the removal of the USTs or if contaminated soil remains beneath portions of the Soto Station outside of the areas excavated during construction. Based on the extensive excavation that was performed during construction of the subway it is possible that potential soil contamination for the historic uses of the property would have been removed; however, without records documenting the extent of the removal, the threat of a vapor encroachment risk to the Site cannot be ruled out.

We recommend that a soil vapor survey be conducted to evaluate the potential presence of volatile organic compounds in soil vapor beneath the Site.

#### 9.0 **REFERENCES**

- American Society for Testing and Materials, *Designation E 1527-13 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*, 2013.
- Ami Adini & Associates, Inc., Groundwater Monitoring Report Fourth Quarter 2013, Former Service Station 2239 East First Street, Los Angeles California 92571. LARWQCB File No. 900330298 (D-1), November 20, 2013.
- California Division of Mines and Geology, Geologic Map Los Angeles Quadrangle, 1969.
- Los Angeles, California, 7.5-minute topographic map (USGS, 1994)
- California Geological Survey (CGS), Note 36, California Geomorphic Provinces, 2002.
- California State Water Resources Board. GeoTracker, <a href="http://geotracker.swrcb.ca.gov/">http://geotracker.swrcb.ca.gov/</a>, April 2018.
- Economy Environmental, Inc., Groundwater Monitoring and Interim Remediation Progress Report First Half 2017, Winall Oil Co. – Station No. 1 401 S Soto Street, Los Angeles, California, LARWQCB File No. 900330426, 2017.
- State of California Department of Conservation, Division of Oil, Gas & Geothermal Resources DOGGR Home Page, <u>http://www.conservation.ca.gov/dog/Pages/Index.aspx</u>, accessed in April 2018.
- State of California, Department of Toxic Substances Control, EnviroStor website (<u>http://www.envirostor.dtsc.ca.gov/public/</u>, April 2018.
- United States Department of Agriculture, Natural Resources Conservation Service, <u>http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx</u>, April 2018.
- USGS, Los Angeles, California, 7.5-minute Topographic Map, 1994.

#### 10.0 QUALIFICATIONS

This Phase I II ESA report was prepared by Mr. Mike Conkle, PG. Mr. Conkle has an BS degree in Geological Science and 20 years of experience in environmental investigation and remediation, including soil and groundwater remedial actions for private industrial and government clients. He has managed a wide variety of projects for clients in the manufacturing, transportation, real estate development industries. Mr. Conkle has extensive experience in the performance of Phase I and II ESAs of commercial, industrial, and agricultural properties throughout California.

I declare that, to the best of my professional knowledge and belief, I meet the definition of environmental professional as defined in §312.10 of 40 CFR 312 and I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries investigation in conformance with the standards and practices set forth in 40 CFR Part 312.

Pelel

Mike Conkle, PG Senior Geologist

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ENVIRONMENTAL GEOTECHNICAL MATERIALS 3303 N. SAN FERNANDO BLVD. - SUITE 100 - BURBANK, CA 91504 PHONE (818) 841-8388 - FAX (818) 841-1704

DRAFTED BY: SJB

CHECKED BY: MPC

# VICINITY MAP

119 & 121 SOUTH SOTO STREET AND 2316 - 2324 EAST 1ST STREET LOS ANGELES, CALIFORNIA

MAY 2018

PROJECT NO. A9622-77-02

FIG. 1



# LEGEND



MAY 2018

PROJECT NO. A9622-77-02

FIG. 2





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M.R. 5 - 568



REVISED 740114813 740918201

991229 2003052706007001 - 11 2003082610004001 - 11,27 2004092104

2006012310009001-27 2006080702004001-27 2006/10/02008001-11

ASSESSOR'S MAP COUNTY OF LOS ANGELES, CALIF.



# **User Questionnaire**

The following are a list of questions that are required to be asked of the user of the report as part of the All Appropriate Inquiry requirements for Phase I ESAs. Please answer them to the best of your knowledge.

1) Are chain of title, appraisal and sale agreement records available for the Site? If available, please provide.

ELACC holds an Exclusive Negation Agreement with METRO. ELACC has a title report prepared for the site but no other record available for the site.

2) Please provide names and contact information of all known current and previous Site owners, occupants, and property managers.

Unknown.

3) If the reason for this Phase I is other than to identify recognized environmental conditions (RECs) at the property, please indicate the reason.

No other reason. We need to start our entitlements process and also our design and need information on the environmental to begin this process.

4) Are you aware of any environmental cleanup liens against the *property* that are filed or recorded under federal, tribal, state or local law? (*Reference: 40 CFR 312.25 - Environmental cleanup liens that are filed or recorded against the site*).

<u>No.</u>

5) Are you aware of any activity and use limitations (AULs), such as *engineering controls*, land use restrictions or *institutional controls* that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state or local law? (*Reference: 40 CFR 312.26 - Activity and land use limitations that are in place on the site or that have been filed or recorded in a registry*).

Yes. Based on the title report pulled, we understand that there is an under ground clarifier under one of the APNs that would prevent ELACC to develop housing. ELACC is looking into this as we hope its an item that is still in title but has been physically removed.

6) As the *user* of this *ESA*, do you have any specialized knowledge or experience related to the *property* or nearby properties? For example, are you involved in the same line of business as the current or former *occupants* of the *property* or an adjoining *property* so that you would have specialized knowledge of the chemicals and processes used by this type of business? (*Reference: 40 CFR 312.28 - Specialized knowledge or experience of the person seeking to qualify for the LLP*).

The site is currently vacant. However ELACC plans to develop affordable housing on the same site. ELACC owns 2 other properties along Soto Street and 2 on 1<sup>st</sup> Street (all within 1,000 square feet).

7) Does the purchase price being paid for this *property* reasonably reflect the fair market value of the *property*? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the *property*? (*Reference: 40 CFR 312.29 - Relationship of the purchase price to the fair market value of the property if it were not contaminated*).

#### There is no appraisal yet to determine.

8) Are you aware of commonly known or *reasonably ascertainable* information about the *property* that would help the *environmental professional* to identify conditions indicative of releases or threatened releases? (*Reference: 40 CFR 312.30 - Commonly known or reasonably ascertainable information about the property*).

For example, as *user*,

(a) Do you know the past uses of the *property*?

Yes. Residential uses.

(b) Do you know of specific chemicals that are present or once were present at the property?

No.

(c) Do you know of spills or other chemical releases that have taken place at the *property*?

No.

(d) Do you know of any environmental cleanups that have taken place at the *property*?

No.

9) As the user of this ESA, based on your knowledge and experience related to the property are there any obvious indications of the presence or likely presence of contamination at the property? (Reference: 40 CFR 312.31 - The degree of obviousness of the presence of likely presence of contamination at the property, and the ability to detect the contamination by appropriate investigation).

No.




### 119/121 S. Soto Street & 2316/2324 1st St. Phase 1

119 South Soto Street Los Angeles, CA 90033

Inquiry Number: 4967023.2s June 14, 2017

# The EDR Radius Map<sup>™</sup> Report with GeoCheck®



6 Armstrong Road, 4th floor Shelton, CT 06484 Toll Free: 800.352.0050 www.edrnet.com

FORM-LBC-LMI

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### **GEOCHECK ADDENDUM**

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*Thank you for your business.* Please contact EDR at 1-800-352-0050 with any questions or comments.

#### **Disclaimer - Copyright and Trademark Notice**

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A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

#### TARGET PROPERTY INFORMATION

#### ADDRESS

119 SOUTH SOTO STREET LOS ANGELES, CA 90033

#### COORDINATES

Latitude (North):	34.0434000 - 34° 2' 36.24''
Longitude (West):	118.2104960 - 118° 12' 37.78"
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	388264.6
UTM Y (Meters):	3767434.2
Elevation:	302 ft. above sea level

#### USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5630795 LOS ANGELES, CA
Version Date:	2012

#### **AERIAL PHOTOGRAPHY IN THIS REPORT**

Portions of Photo from:	20140513
Source:	USDA

#### Target Property Address: 119 SOUTH SOTO STREET LOS ANGELES, CA 90033

Click on Map ID to see full detail.

1	Δ	P	

	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.)
A1	SOTO STATION	2322 E 1ST ST	HAZNET	Lower	1 ft.
A2	SOTO STATION	2322 E 1ST ST	HAZNET	Lower	1 ft.
A3	FISHER A H	2336 E 1ST TER	EDR Hist Auto	Lower	25, 0.005, NNE
A4	ENDLICH EDW	2332 E 1ST TER	EDR Hist Auto	Lower	26, 0.005, NNE
A5	SUN CHEW	2318 E 1ST TER	EDR Hist Cleaner	Lower	28, 0.005, North
A6	GUADALAJARA AUTO SAL	111 S SOTO ST	UST, SWEEPS UST, HIST UST	Lower	51, 0.010, East
A7	GUADALAJARA AUTO SAL	111 S SOTO ST	CA FID UST	Lower	51, 0.010, East
<b>A8</b>	BEITCH HARRY	2306 E 1ST TER	EDR Hist Cleaner	Lower	89, 0.017, NNW
A9	NOTOMI H	2304 E 1ST TER	EDR Hist Cleaner	Lower	96, 0.018, NNW
A10	BINDER BROS	100 N SOTO ST	EDR Hist Auto	Lower	167, 0.032, ENE
A11	BINDER BROS	2401 E 1ST TER	EDR Hist Auto	Lower	210, 0.040, ENE
B12	ASOO S	2404 E 1ST TER	EDR Hist Cleaner	Lower	217, 0.041, East
B13	SUPRUNUK YOUART	110 N SOTO ST	EDR Hist Auto	Higher	241, 0.046, NE
C14	MAYFAIR CLEANERS	2234 FIRST ST	RCRA-SQG, DRYCLEANERS, HAZNET	Lower	255, 0.048, NW
C15	KWIK CLEANERS	2234 E 1ST ST	EDR Hist Cleaner	Lower	255, 0.048, NW
C16	MONRREAL MOTOR SERVI	2239 E 1ST ST	RCRA-SQG	Lower	276, 0.052, NNW
C17	MURRY LEFKOWITZ	2239 E 1ST ST	SWEEPS UST, CA FID UST	Lower	276, 0.052, NNW
C18	MONRREAL MOTOR SERVI	2239 E 1ST ST	RCRA-SQG, FINDS, ECHO	Lower	276, 0.052, NNW
C19	FIRST & BREED SUPER	2239 E FIRST	EDR Hist Auto	Lower	276, 0.052, NNW
B20	AVILA JAIRO A	2420 E 1ST ST	EDR Hist Cleaner	Lower	333, 0.063, East
C21	TEMKIN SAML	2224 E 1ST TER	EDR Hist Cleaner	Lower	353, 0.067, NW
B22	GOLDSTEIN SAML	2423 E 1ST TER	EDR Hist Cleaner	Lower	398, 0.075, East
D23	LA BEN FRANKLIN LIBR	2200 E 1ST ST	RCRA-SQG, FINDS, ECHO	Lower	484, 0.092, WNW
24	COHEN SAML	2501 E 1ST TER	EDR Hist Cleaner	Lower	580, 0.110, East
D25	LA FIRE STATION	2127 E 1ST ST	RCRA NonGen / NLR, FINDS, ECHO, HAZNET	Lower	701, 0.133, WNW
D26	FIRE STATION #2	2127 E 1ST ST	HIST UST	Lower	701, 0.133, WNW
D27	FIRE STATION 2	2127 E FIRST ST	HIST UST	Lower	701, 0.133, WNW
D28	LOS ANGELES FIRE STA	2127 E 1ST ST	SWEEPS UST, CA FID UST	Lower	701, 0.133, WNW
E29	MARLENE'S MUFFLER SH	2239 001ST ST E	LUST	Lower	795, 0.151, WNW
30	LOS ANGELES USD BREE	2226 E THIRD ST	RCRA-SQG, FINDS, ECHO	Higher	807, 0.153, WSW
31	LA E/N EAST CHILD CA	233 N BREED	RCRA-SQG, FINDS, ECHO	Higher	959, 0.182, NNE
E32	LAPD - HOLLENBECK GA	2111 E 1ST ST	LUST, UST, SWEEPS UST, HIST UST	Higher	979, 0.185, NW
E33	HOLLENBECK POLICE ST	2111 E 1ST ST	CA FID UST	Higher	979, 0.185, NW
F34	CHEVRON STATION 9066	2333 E 4TH ST	SWEEPS UST, CA FID UST	Higher	980, 0.186, SW
F35	90668	2333 E 4TH ST	HIST UST	Higher	980, 0.186, SW
F36	WINALL #1	401 SOTO ST. S.	LUST	Higher	1013, 0.192, SSW
F37	EAST L A PHOTO AND S	2323 E 4TH ST	RCRA-SQG, FINDS, ECHO, HAZNET	Higher	1013, 0.192, SW
F38	WINALL OIL CO	401 S SOTO ST	UST	Higher	1129, 0.214, SSW
F39	WINALL OIL COMPANY	401 S SOTO ST	SWEEPS UST, CA FID UST	Higher	1129, 0.214, SSW

#### Target Property Address: 119 SOUTH SOTO STREET LOS ANGELES, CA 90033

Click on Map ID to see full detail.

MAP				RELATIVE	DIST (ft. & mi.)
ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	ELEVATION	DIRECTION
G40	CHA SHELL	400 S SOTO ST	SWEEPS UST, CA FID UST	Higher	1129, 0.214, SSW
G41	SHELL SERVICE STATIO	400 S SOTO ST	RCRA-SQG, LUST, UST	Higher	1129, 0.214, SSW
H42	M & Y SERVICE STATIO	2701 001ST ST E	LUST	Higher	1482, 0.281, ESE
H43	M & Y SERVICE STATIO	2701 001ST	HIST UST, HIST CORTESE	Higher	1482, 0.281, ESE
144	SHELL - KOBASSI	2005 4TH STREET, EAS	LUST	Lower	1662, 0.315, West
145	SHELL SERVICE STATIO	2005 E FOURTH / CUMM	RCRA-SQG, LUST	Lower	1662, 0.315, West
46	EAST L A RECYCLING C	2750 E 1ST ST	SWRCY	Higher	1852, 0.351, ESE
47	VEGA AUTO SERVICE	1869 001ST ST E	LUST, ENF, HIST CORTESE	Higher	2285, 0.433, WNW
48	SUPER RECYCLING	530 N FICKETT ST	SWRCY	Higher	2473, 0.468, NE
J49	SHELL #204-4534-2700	1900 CESAR CHAVEZ AV	LUST	Higher	2535, 0.480, NNW
J50	SHELL #204-4534-2700	1900 CESAR CHAVEZ	HIST CORTESE	Higher	2535, 0.480, NNW
51	AL SAL OIL #25	1800 4TH ST.	LUST	Lower	2637, 0.499, West
52	MANUAL ARTS NEW ELEM	700 STATE STREET	ENVIROSTOR, SCH	Higher	3321, 0.629, NNW
53	SOTO STREET	1010 SOTO STREET	ENVIROSTOR, SCH	Lower	4549, 0.862, SSW
54	CENTRAL REGION MIDDL	2821 EAST 7TH STREET	ENVIROSTOR, SCH	Higher	4991, 0.945, South

#### TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

#### DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

#### STANDARD ENVIRONMENTAL RECORDS

#### Federal NPL site list

NPL	National Priority List
Proposed NPL	Proposed National Priority List Sites
NPL LIENS	Federal Superfund Liens

#### Federal Delisted NPL site list

Delisted NPL\_\_\_\_\_ National Priority List Deletions

#### Federal CERCLIS list

FEDERAL FACILITY\_\_\_\_\_\_ Federal Facility Site Information listing SEMS\_\_\_\_\_\_ Superfund Enterprise Management System

#### Federal CERCLIS NFRAP site list

SEMS-ARCHIVE...... Superfund Enterprise Management System Archive

#### Federal RCRA CORRACTS facilities list

CORRACTS..... Corrective Action Report

#### Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF..... RCRA - Treatment, Storage and Disposal

#### Federal RCRA generators list

RCRA-LQG\_\_\_\_\_\_RCRA - Large Quantity Generators RCRA-CESQG\_\_\_\_\_\_RCRA - Conditionally Exempt Small Quantity Generator

#### Federal institutional controls / engineering controls registries

LUCIS	Land Use Control Information System
US ENG CONTROLS	Engineering Controls Sites List
US INST CONTROL	Sites with Institutional Controls

#### Federal ERNS list

ERNS..... Emergency Response Notification System

#### State- and tribal - equivalent NPL

RESPONSE..... State Response Sites

#### State and tribal landfill and/or solid waste disposal site lists

SWF/LF\_\_\_\_\_ Solid Waste Information System

#### State and tribal leaking storage tank lists

INDIAN LUST...... Leaking Underground Storage Tanks on Indian Land SLIC...... Statewide SLIC Cases

#### State and tribal registered storage tank lists

FEMA UST	Underground Storage Tank Listing
AST	Aboveground Petroleum Storage Tank Facilities
INDIAN UST	Underground Storage Tanks on Indian Land

#### State and tribal voluntary cleanup sites

INDIAN VCP	Voluntary	/ Cleanup	o Priority Li	sting
VCP	Voluntary	/ Cleanu	o Program I	Properties

#### State and tribal Brownfields sites

BROWNFIELDS..... Considered Brownfieds Sites Listing

#### ADDITIONAL ENVIRONMENTAL RECORDS

#### Local Brownfield lists

US BROWNFIELDS..... A Listing of Brownfields Sites

#### Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT	Waste Management Unit Database
HAULERS	Registered Waste Tire Haulers Listing
INDIAN ODI	Report on the Status of Open Dumps on Indian Lands
DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations
ODI	Open Dump Inventory
IHS OPEN DUMPS	Open Dumps on Indian Land

#### Local Lists of Hazardous waste / Contaminated Sites

AOCONCERN	San Gabriel Valley Areas of Concern
US HIST CDL	Delisted National Clandestine Laboratory Register
HIST Cal-Sites	Historical Calsites Database
SCH	School Property Evaluation Program

CDL	Clandestine Drug Labs
Toxic Pits	Toxic Pits Cleanup Act Sites
US CDL	National Clandestine Laboratory Register

#### Local Land Records

LIENS	Environmental Liens Listing
LIENS 2	CERCLA Lien Information
DEED	Deed Restriction Listing

### Records of Emergency Release Reports

HMIRS	Hazardous Materials Information Reporting System
CHMIRS	California Hazardous Material Incident Report System
LDS	Land Disposal Sites Listing
MCS	Military Cleanup Sites Listing
SPILLS 90	SPILLS 90 data from FirstSearch

#### Other Ascertainable Records

FUDS	Formerly Used Defense Sites
DOD	Department of Defense Sites
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR	Financial Assurance Information
EPA WATCH LIST	. EPA WATCH LIST
2020 COR ACTION	2020 Corrective Action Program List
TSCA	Toxic Substances Control Act
TRIS	Toxic Chemical Release Inventory System
SSTS	Section 7 Tracking Systems
ROD	Records Of Decision
RMP	Risk Management Plans
RAATS	RCRA Administrative Action Tracking System
PRP	Potentially Responsible Parties
PADS	PCB Activity Database System
ICIS	Integrated Compliance Information System
FTTS	. FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide
	Act)/TSCA (Toxic Substances Control Act)
MLTS	Material Licensing Tracking System
COAL ASH DOE	Steam-Electric Plant Operation Data
COAL ASH EPA	. Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
RADINFO	Radiation Information Database
HIST FTTS	. FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS	Incident and Accident Data
CONSENT	Superfund (CERCLA) Consent Decrees
INDIAN RESERV	Indian Reservations
FUSRAP	Formerly Utilized Sites Remedial Action Program
UMTRA	Uranium Mill Tailings Sites
LEAD SMELTERS	Lead Smelter Sites
US AIRS	Aerometric Information Retrieval System Facility Subsystem
US MINES	Mines Master Index File
ABANDONED MINES	Abandoned Mines
FINDS	. Facility Index System/Facility Registry System
UXO	Unexploded Ordnance Sites
DOCKET HWC	Hazardous Waste Compliance Docket Listing

ECHO_ FUELS PROGRAM_ CA BOND EXP. PLAN_ Cortese_ CUPA Listings_ EMI_ ENF_ Financial Assurance_ ICE_ LOS ANGELES CO. HMS_ HWP_ HWT_ MINES_ MWMP_ NPDES_ PEST LIC_ PROC_ Notify 65_ LA Co. Site Mitigation_ UIC_ WASTEWATER PITS_ WDS_ WUP	<ul> <li>Enforcement &amp; Compliance History Information</li> <li>EPA Fuels Program Registered Listing</li> <li>Bond Expenditure Plan</li> <li>"Cortese" Hazardous Waste &amp; Substances Sites List</li> <li>CUPA Resources List</li> <li>Emissions Inventory Data</li> <li>Enforcement Action Listing</li> <li>Financial Assurance Information Listing</li> <li>ICE</li> <li>HMS: Street Number List</li> <li>EnviroStor Permitted Facilities Listing</li> <li>Registered Hazardous Waste Transporter Database</li> <li>Mines Site Location Listing</li> <li>Medical Waste Management Program Listing</li> <li>NPDES Permits Listing</li> <li>Pesticide Regulation Licenses Listing</li> <li>Certified Processors Database</li> <li>Proposition 65 Records</li> <li>Site Mitigation List</li> <li>UIC Listing</li> <li>Oil Wastewater Pits Listing</li> <li>Waste Discharge System</li> <li>Well Investigation Program Case List</li> </ul>
WIP	Well Investigation Program Case List

#### EDR HIGH RISK HISTORICAL RECORDS

#### EDR Exclusive Records

EDR MGP..... EDR Proprietary Manufactured Gas Plants

#### EDR RECOVERED GOVERNMENT ARCHIVES

#### Exclusive Recovered Govt. Archives

RGA LF...... Recovered Government Archive Solid Waste Facilities List RGA LUST...... Recovered Government Archive Leaking Underground Storage Tank

#### SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property. Page numbers and map identification numbers refer to the EDR Radius Map report where detailed

Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in *bold italics* are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

#### STANDARD ENVIRONMENTAL RECORDS

#### Federal RCRA generators list

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 12/12/2016 has revealed that there are 8 RCRA-SQG sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LOS ANGELES USD BREE	2226 E THIRD ST	WSW 1/8 - 1/4 (0.153 mi.)	30	39
LA E/N EAST CHILD CA	233 N BREED	NNE 1/8 - 1/4 (0.182 mi.)	31	41
EAST L A PHOTO AND S	2323 E 4TH ST	SW 1/8 - 1/4 (0.192 mi.)	F37	53
SHELL SERVICE STATIO	400 S SOTO ST	SSW 1/8 - 1/4 (0.214 mi.)	G41	58
Lower Elevation	Address	Direction / Distance	Man ID	Page
MAYFAIR CLEANERS	2234 FIRST ST	NW 0 - 1/8 (0.048 mi.)	C14	15
MAYFAIR CLEANERS MONRREAL MOTOR SERVI	<b>2234 FIRST ST</b> 2239 E 1ST ST	<b>NW 0 - 1/8 (0.048 mi.)</b> NNW 0 - 1/8 (0.052 mi.)	<b>C14</b> C16	<b>15</b> 19
MAYFAIR CLEANERS MONRREAL MOTOR SERVI MONRREAL MOTOR SERVI	2234 FIRST ST 2239 E 1ST ST 2239 E 1ST ST 2239 E 1ST ST	NW 0 - 1/8 (0.048 mi.) NNW 0 - 1/8 (0.052 mi.) NNW 0 - 1/8 (0.052 mi.)	<b>C14</b> C16 <b>C18</b>	<b>15</b> 19 <b>21</b>

#### State- and tribal - equivalent CERCLIS

ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list, as provided by EDR, and dated 01/30/2017 has revealed that there are 3 ENVIROSTOR sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MANUAL ARTS NEW ELEM Facility Id: 19840001 Status: No Further Action	700 STATE STREET	NNW 1/2 - 1 (0.629 mi.)	52	96
<b>CENTRAL REGION MIDDL</b> Facility Id: 60000584 Status: Inactive - Needs Evaluation	2821 EAST 7TH STREET	S 1/2 - 1 (0.945 mi.)	54	101
Lower Elevation	Address	Direction / Distance	Map ID	Page
SOTO STREET	1010 SOTO STREET	SSW 1/2 - 1 (0.862 mi.)	53	98

Facility Id: 19000004 Status: Inactive - Action Required

#### State and tribal leaking storage tank lists

LUST: Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

A review of the LUST list, as provided by EDR, has revealed that there are 10 LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LAPD - HOLLENBECK GA Database: LUST, Date of Governme Status: Completed - Case Closed Global Id: T0603737703	2111 E 1ST ST ent Version: 03/13/2017	NW 1/8 - 1/4 (0.185 mi.)	E32	42
WINALL #1 Database: LUST, Date of Governme Status: Open - Remediation Global Id: T0603739097	401 SOTO ST. S. ent Version: 03/13/2017	SSW 1/8 - 1/4 (0.192 mi.)	F36	49
SHELL SERVICE STATIO Database: LUST REG 4, Date of Go Database: LUST, Date of Governme Status: Completed - Case Closed Facility Id: 900330389 Status: Leak being confirmed Global Id: T0603760383 Global ID: T0603760383	<i>400 S SOTO ST</i> overnment Version: 09/07/2004 ent Version: 03/13/2017	SSW 1/8 - 1/4 (0.214 mi.)	G41	58
M & Y SERVICE STATIO Database: LUST REG 4, Date of Go Database: LUST, Date of Governme Status: Completed - Case Closed Facility Id: 900330143 Status: Case Closed Global Id: T0603700833 Global ID: T0603700833	2701 001ST ST E overnment Version: 09/07/2004 ent Version: 03/13/2017	ESE 1/4 - 1/2 (0.281 mi.)	H42	66
VEGA AUTO SERVICE Database: LUST REG 4, Date of Ge Database: LUST, Date of Governme Status: Completed - Case Closed Facility Id: 900330198 Status: Remedial action (cleanup) U Global Id: T0603700838 Global ID: T0603700838	<b>1869 001ST ST E</b> overnment Version: 09/07/2004 ent Version: 03/13/2017 Jnderway	WNW 1/4 - 1/2 (0.433 mi.)	47	77
SHELL #204-4534-2700 Database: LUST REG 4, Date of Go Database: LUST, Date of Governme Status: Completed - Case Closed Facility Id: 900330170	1900 CESAR CHAVEZ AV overnment Version: 09/07/2004 ent Version: 03/13/2017	NNW 1/4 - 1/2 (0.480 mi.)	J49	84

Status: Remedial action (cleanup) Underway Global Id: T0603700836 Global ID: T0603700836

Lower Elevation	Address	Direction / Distance	Map ID	Page
MARLENE'S MUFFLER SH Database: LUST REG 4, Date of Government Version Database: LUST, Date of Government Version Completed - Case Closed Facility Id: 900330298 Status: Pollution Characterization Global Id: T0603700848 Global ID: T0603700848	2239 001ST ST E ment Version: 09/07/2004 ersion: 03/13/2017	WNW 1/8 - 1/4 (0.151 mi.)	E29	32
SHELL - KOBASSI Database: LUST, Date of Government Ve Status: Completed - Case Closed Global Id: T0603732654	2005 4TH STREET, EAS ersion: 03/13/2017	W 1/4 - 1/2 (0.315 mi.)	144	69
SHELL SERVICE STATIO Database: LUST REG 4, Date of Government Versitatus: Completed - Case Closed Facility Id: 900330307 Status: Case Closed Global Id: T0603700849 Global ID: T0603700849	2005 E FOURTH / CUMM ment Version: 09/07/2004 ersion: 03/13/2017	W 1/4 - 1/2 (0.315 mi.)	145	72
AL SAL OIL #25 Database: LUST, Date of Government Ve Status: Open - Site Assessment Global Id: T0603783818	1800 4TH ST. ersion: 03/13/2017	W 1/4 - 1/2 (0.499 mi.)	51	91

#### State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, has revealed that there are 4 UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LAPD - HOLLENBECK GA Database: UST, Date of Governme Facility Id: CAD981656218 Facility Id: 25061	2111 E 1ST ST ent Version: 03/12/2017	NW 1/8 - 1/4 (0.185 mi.)	E32	42
WINALL OIL CO Database: UST, Date of Governme Facility Id: 24378	401 S SOTO ST ent Version: 03/12/2017	SSW 1/8 - 1/4 (0.214 mi.)	F38	55
SHELL SERVICE STATIO Database: UST, Date of Governme	<b>400 S SOTO ST</b> ent Version: 03/12/2017	SSW 1/8 - 1/4 (0.214 mi.)	G41	58

Facility Id: 23924

Lower Elevation	Address	Direction / Distance	Map ID	Page
GUADALAJARA AUTO SAL	111 S SOTO ST	E 0 - 1/8 (0.010 mi.)	A6	11
Database: UST, Date of Governme	nt Version: 03/12/2017			
Facility Id: 24318				

#### ADDITIONAL ENVIRONMENTAL RECORDS

#### Local Lists of Landfill / Solid Waste Disposal Sites

SWRCY: A listing of recycling facilities in California.

A review of the SWRCY list, as provided by EDR, and dated 03/13/2017 has revealed that there are 2 SWRCY sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
EAST L A RECYCLING C Cert Id: RC11354	2750 E 1ST ST	ESE 1/4 - 1/2 (0.351 mi.)	46	76
SUPER RECYCLING Cert Id: RC248362.001	530 N FICKETT ST	NE 1/4 - 1/2 (0.468 mi.)	48	83

#### Local Lists of Registered Storage Tanks

SWEEPS UST: Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

A review of the SWEEPS UST list, as provided by EDR, and dated 06/01/1994 has revealed that there are 7 SWEEPS UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LAPD - HOLLENBECK GA Status: A Tank Status: A Comp Number: 2614	2111 E 1ST ST	NW 1/8 - 1/4 (0.185 mi.)	E32	42
CHEVRON STATION 9066 Comp Number: 3470	2333 E 4TH ST	SW 1/8 - 1/4 (0.186 mi.)	F34	46
WINALL OIL COMPANY Status: A Comp Number: 4707	401 S SOTO ST	SSW 1/8 - 1/4 (0.214 mi.)	F39	56
CHA SHELL Status: A Tank Status: A	400 S SOTO ST	SSW 1/8 - 1/4 (0.214 mi.)	G40	57

Comp Number: 4466

Lower Elevation	Address	Direction / Distance	Map ID	Page
GUADALAJARA AUTO SAL Status: A Tank Status: A Comp Number: 1803	111 S SOTO ST	E 0 - 1/8 (0.010 mi.)	A6	11
MURRY LEFKOWITZ Comp Number: 5158	2239 E 1ST ST	NNW 0 - 1/8 (0.052 mi.)	C17	20
LOS ANGELES FIRE STA Status: A Tank Status: A Comp Number: 2577	2127 E 1ST ST	WNW 1/8 - 1/4 (0.133 mi.)	D28	31

#### HIST UST: Historical UST Registered Database.

A review of the HIST UST list, as provided by EDR, and dated 10/15/1990 has revealed that there are 5 HIST UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LAPD - HOLLENBECK GA Facility Id: 00000047439	2111 E 1ST ST	NW 1/8 - 1/4 (0.185 mi.)	E32	42
90668 Facility Id: 00000061874	2333 E 4TH ST	SW 1/8 - 1/4 (0.186 mi.)	F35	48
Lower Elevation	Address	Direction / Distance	Map ID	Page
GUADALAJARA AUTO SAL Facility Id: 00000029478	111 S SOTO ST	E 0 - 1/8 (0.010 mi.)	A6	11
FIRE STATION #2 Facility Id: 00000047394	2127 E 1ST ST	WNW 1/8 - 1/4 (0.133 mi.)	D26	30
FIRE STATION 2	2127 E FIRST ST	WNW 1/8 - 1/4 (0.133 mi.)	D27	30

CA FID UST: The Facility Inventory Database contains active and inactive underground storage tank locations. The source is the State Water Resource Control Board.

A review of the CA FID UST list, as provided by EDR, and dated 10/31/1994 has revealed that there are 7 CA FID UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
HOLLENBECK POLICE ST Facility Id: 19023507 Status: A	2111 E 1ST ST	NW 1/8 - 1/4 (0.185 mi.)	E33	46
CHEVRON STATION 9066 Facility Id: 19006724 Status: I	2333 E 4TH ST	SW 1/8 - 1/4 (0.186 mi.)	F34	46
WINALL OIL COMPANY	401 S SOTO ST	SSW 1/8 - 1/4 (0.214 mi.)	F39	56

Facility Id: 19009951 Status: A				
<b>CHA SHELL</b> Facility Id: 19034784 Status: A	400 S SOTO ST	SSW 1/8 - 1/4 (0.214 mi.)	G40	57
Lower Elevation	Address	Direction / Distance	Map ID	Page
GUADALAJARA AUTO SAL Facility Id: 19036404 Status: A	111 S SOTO ST	E 0 - 1/8 (0.010 mi.)	A7	13
MURRY LEFKOWITZ Facility Id: 19014542 Status: I	2239 E 1ST ST	NNW 0 - 1/8 (0.052 mi.)	C17	20
LOS ANGELES FIRE STA Facility Id: 19024393 Status: A	2127 E 1ST ST	WNW 1/8 - 1/4 (0.133 mi.)	D28	31

#### Other Ascertainable Records

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 12/12/2016 has revealed that there is 1 RCRA NonGen / NLR site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
LA FIRE STATION	2127 E 1ST ST	WNW 1/8 - 1/4 (0.133 mi.)	D25	27

DRYCLEANERS: A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaners' agents; linen supply; coin-operated laundries and cleaning; drycleaning plants except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

A review of the DRYCLEANERS list, as provided by EDR, and dated 03/09/2017 has revealed that there is 1 DRYCLEANERS site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
MAYFAIR CLEANERS	2234 FIRST ST	NW 0 - 1/8 (0.048 mi.)	C14	15
EPA Id: CAL000307447				

HAZNET: The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000-1,000,000 annually, representing approximately 350,000-500,000 shipments. Data from non-California manifests & continuation sheets are not included at the present time. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, & disposal method. The source is the Department of Toxic Substance Control is the agency. This database begins with calendar year 1993.

A review of the HAZNET list, as provided by EDR, and dated 12/31/2015 has revealed that there are 2 HAZNET sites within approximately 0.001 miles of the target property.

Lower Elevation	Address	<b>Direction / Distance</b>	Map ID	Page
SOTO STATION GEPAID: CAP000158378	2322 E 1ST ST	0 - 1/8 (0.000 mi.)	A1	8
SOTO STATION GEPAID: CAP000158014	2322 E 1ST ST	0 - 1/8 (0.000 mi.)	A2	9

HIST CORTESE: The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

A review of the HIST CORTESE list, as provided by EDR, and dated 04/01/2001 has revealed that there are 3 HIST CORTESE sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
<i>M &amp; Y SERVICE STATIO</i> Reg ld: 900330143	2701 001ST	ESE 1/4 - 1/2 (0.281 mi.)	H43	68
VEGA AUTO SERVICE Reg ld: 900330198	1869 001ST ST E	WNW 1/4 - 1/2 (0.433 mi.)	47	77
SHELL #204-4534-2700 Reg ld: 900330170	1900 CESAR CHAVEZ	NNW 1/4 - 1/2 (0.480 mi.)	J50	91

#### EDR HIGH RISK HISTORICAL RECORDS

#### EDR Exclusive Records

EDR Hist Auto: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR Hist Auto list, as provided by EDR, has revealed that there are 6 EDR Hist Auto sites within approximately 0.125 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SUPRUNUK YOUART	110 N SOTO ST	NE 0 - 1/8 (0.046 mi.)	B13	14

Lower Elevation	Address	Direction / Distance	Map ID	Page
FISHER A H	2336 E 1ST TER	NNE 0 - 1/8 (0.005 mi.)	A3	10
ENDLICH EDW	2332 E 1ST TER	NNE 0 - 1/8 (0.005 mi.)	A4	10
BINDER BROS	100 N SOTO ST	ENE 0 - 1/8 (0.032 mi.)	A10	14
BINDER BROS	2401 E 1ST TER	ENE 0 - 1/8 (0.040 mi.)	A11	14
FIRST & BREED SUPER	2239 E FIRST	NNW 0 - 1/8 (0.052 mi.)	C19	22

EDR Hist Cleaner: EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR Hist Cleaner list, as provided by EDR, has revealed that there are 9 EDR Hist Cleaner sites within approximately 0.125 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
SUN CHEW	2318 E 1ST TER	N 0 - 1/8 (0.005 mi.)	A5	11
BEITCH HARRY	2306 E 1ST TER	NNW 0 - 1/8 (0.017 mi.)	A8	13
NOTOMI H	2304 E 1ST TER	NNW 0 - 1/8 (0.018 mi.)	A9	13
ASOO S	2404 E 1ST TER	E 0 - 1/8 (0.041 mi.)	B12	14
KWIK CLEANERS	2234 E 1ST ST	NW 0 - 1/8 (0.048 mi.)	C15	18
AVILA JAIRO A	2420 E 1ST ST	E 0 - 1/8 (0.063 mi.)	B20	24
TEMKIN SAML	2224 E 1ST TER	NW 0 - 1/8 (0.067 mi.)	C21	24
GOLDSTEIN SAML	2423 E 1ST TER	E 0 - 1/8 (0.075 mi.)	B22	25
COHEN SAML	2501 E 1ST TER	E 0 - 1/8 (0.110 mi.)	24	26

Due to poor or inadequate address information, the following sites were not mapped. Count: 2 records.

Site Name

DENA NEW PRIMARY CENTER CENTRAL REGION HIGH SCHOOL #15 Database(s)

ENVIROSTOR, SCH ENVIROSTOR, SCH

### **OVERVIEW MAP - 4967023.2S**



Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites



Power transmission lines 100-year flood zone 500-year flood zone

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

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SITE NAME: ADDRESS: LAT/LONG:	119/121 S. Soto Street & 2316/2324 1st St. Phase 1 119 South Soto Street Los Angeles CA 90033 34.0434 / 118.210496	CLIENT: Geocon Geotechnical & Env CONTACT: Mike Akoto INQUIRY #: 4967023.2s DATE: June 14, 2017 9:41 pm
		Copyright © 2017 EDR, Inc. © 2015 TomTom Rel. 2015.

### DETAIL MAP - 4967023.2S



Dept. Defense Sites

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: ADDRESS: LAT/LONG:	119/121 S. Soto Street & 2316/2324 1st St. Phase 1 119 South Soto Street Los Angeles CA 90033 34.0434 / 118.210496	CLIENT: CONTACT: INQUIRY #: DATE:	Geocon Geotechnical & Env Mike Akoto 4967023.2s June 14, 2017 9:45 pm
		Consula	nhi @ 2017 FDD Inc. @ 2015 Tem Tem Del. 2015

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMEN	ITAL RECORDS							
Federal NPL site list								
NPL Proposed NPL NPL LIENS	1.000 1.000 0.001		0 0 0	0 0 NR	0 0 NR	0 0 NR	NR NR NR	0 0 0
Federal Delisted NPL si	ite list							
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY SEMS	0.500 0.500		0 0	0 0	0 0	NR NR	NR NR	0 0
Federal CERCLIS NFRA	AP site list							
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRAC	CTS facilities I	ist						
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-COF	RRACTS TSD I	acilities list						
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generato	ors list							
RCRA-LQG RCRA-SQG RCRA-CESQG	0.250 0.250 0.250		0 4 0	0 4 0	NR NR NR	NR NR NR	NR NR NR	0 8 0
Federal institutional con engineering controls re	ntrols / gistries							
LUCIS US ENG CONTROLS US INST CONTROL	0.500 0.500 0.500		0 0 0	0 0 0	0 0 0	NR NR NR	NR NR NR	0 0 0
Federal ERNS list								
ERNS	0.001		0	NR	NR	NR	NR	0
State- and tribal - equiv	alent NPL							
RESPONSE	1.000		0	0	0	0	NR	0
State- and tribal - equiv	alent CERCLIS	S						
ENVIROSTOR	1.000		0	0	0	3	NR	3
State and tribal landfill a solid waste disposal sit	and/or te lists							
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking	storage tank	lists						
LUST	0.500		0	4	6	NR	NR	10

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST SLIC	0.500 0.500		0 0	0 0	0 0	NR NR	NR NR	0 0
State and tribal register	ed storage tai	nk lists						
FEMA UST UST AST INDIAN UST	0.250 0.250 0.250 0.250		0 1 0 0	0 3 0 0	NR NR NR NR	NR NR NR NR	NR NR NR NR	0 4 0 0
State and tribal volunta	ry cleanup site	es						
INDIAN VCP VCP	0.500 0.500		0 0	0 0	0 0	NR NR	NR NR	0 0
State and tribal Brownfi	elds sites							
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONME		<u>s</u>						
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Waste Disposal Sites	Solid							
WMUDS/SWAT SWRCY HAULERS INDIAN ODI DEBRIS REGION 9 ODI IHS OPEN DUMPS	0.500 0.500 0.001 0.500 0.500 0.500 0.500		0 0 0 0 0 0	0 0 NR 0 0 0 0	0 2 NR 0 0 0 0	NR NR NR NR NR NR	NR NR NR NR NR NR	0 2 0 0 0 0 0
Local Lists of Hazardou Contaminated Sites	s waste /							
AOCONCERN US HIST CDL HIST Cal-Sites SCH CDL Toxic Pits US CDL	1.000 0.001 1.000 0.250 0.001 1.000 0.001		0 0 0 0 0 0	0 NR 0 NR 0 NR	0 NR 0 NR 0 NR	0 NR NR NR 0 NR	NR NR NR NR NR NR	0 0 0 0 0 0
Local Lists of Registere	d Storage Tar	nks						
SWEEPS UST HIST UST CA FID UST	0.250 0.250 0.250		2 1 2	5 4 5	NR NR NR	NR NR NR	NR NR NR	7 5 7
Local Land Records								
LIENS LIENS 2 DEED	0.001 0.001 0.500		0 0 0	NR NR 0	NR NR 0	NR NR NR	NR NR NR	0 0 0

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
Records of Emergency I	Release Repo	orts						
HMIRS	0.001		0	NR	NR	NR	NR	0
CHMIRS	0.001		Õ	NR	NR	NR	NR	Õ
LDS	0.001		Ō	NR	NR	NR	NR	Ō
MCS	0.001		Ō	NR	NR	NR	NR	0
SPILLS 90	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Rec	ords							
RCRA NonGen / NLR	0.250		0	1	NR	NR	NR	1
FUDS	1.000		Õ	Ó	0	0	NR	Ó
DOD	1.000		Ō	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		Ō	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOTOPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
	0.001		0	NR	NR	NR	NR	0
	1.000		0	0	0			0
	0.500		0					0
	0.001		0					0
	0.001		0					0
	0.250		0					0
EINDS	0.001		0					0
	1 000		0					0
	0.001		0					0
ECHO	0.001		0	NR	NR	NR	NR	0
	0.001		0		ND	NR		0
	1 000		0	0	0		NR	0
Cortese	0.500		0	0	0	NR	NR	0 0
CLIPA Listings	0.250		0	0	NR	NR	NR	0
DRYCLEANERS	0.250		1	Ő	NR	NR	NR	1
EMI	0.001		0	NŘ	NR	NR	NR	0

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
ENF	0.001		0	NR	NR	NR	NR	0
Financial Assurance	0.001		0	NR	NR	NR	NR	0
HAZNET	0.001		2	NR	NR	NR	NR	2
ICE	0.001		0	NR	NR	NR	NR	0
HIST CORTESE	0.500		0	0	3	NR	NR	3
LOS ANGELES CO. HMS	0.001		0	NR	NR	NR	NR	0
HWP	1.000		0	0	0	0	NR	0
HWT	0.250		0	0	NR	NR	NR	0
MINES	0.001		0	NR	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	0.001		0	NR	NR	NR	NR	0
PEST LIC	0.001		0	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	0	0	0	NR	0
LA Co. Site Mitigation	0.001		0	NR	NR	NR	NR	0
UIC	0.001		0	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	0.001		0	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
EDR HIGH RISK HISTORICAL	RECORDS							
EDR Exclusive Records								
EDR MGP	1 000		0	0	0	0	NR	0
EDR Hist Auto	0.125		6	NR	NR	NR	NR	õ
EDR Hist Cleaner	0.125		9	NR	NR	NR	NR	9
			-					-
EDR RECOVERED GOVERNM	IENT ARCHI	VES						
Exclusive Recovered Gov	t. Archives							
RGA LF	0.001		0	NR	NR	NR	NR	0
RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals		0	28	26	11	3	0	68

#### NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Database(s)

EDR ID Number EPA ID Number

A1 < 1/8	SOTO STATION 2322 E 1ST ST LOS ANGELES, CA 900	33	HAZNET	S113171393 N/A
111.	Site 1 of 11 in cluster A			
Relative: Lower	HAZNET: envid: Xoor:	S113171393		
Actual		2003 C A P000158378		
300 ft.	Contact:	KATHI FEN SWEFT		
	Telephone:	2139227303		
	Mailing Name:	Not reported		
	Mailing Address:	ONE GATEWAY PLAZA		
	Mailing City, St, Zip:	LOS ANGELES, CA 90012		
	Gen County:	Not reported		
	TSD EPA ID:	CAT000646117		
	TSD County:	Not reported		
	Waste Category:	Contaminated soil from site clean-up		
	Disposal Method:	Disposal, Land Fill		
	Tons:	99.45		
	Cat Decode:	Not reported		
	Method Decode:	Not reported		
	Facility County:	Los Angeles		
	envid:	S113171393		
	Year:	2005		
	GEPAID: Contact:			
	Telephone:	NAI IILEEN SWEET 2130227303		
	Mailing Name	Not reported		
	Mailing Address	ONE GATEWAY PLAZA		
	Mailing City.St.Zip:	LOS ANGELES. CA 90012		
	Gen County:	Not reported		
	TSD EPA ID:	CAT000646117		
	TSD County:	Not reported		
	Waste Category:	Contaminated soil from site clean-up		
	Disposal Method:	Not reported		
	Tons:	15.17		
	Cat Decode:	Not reported		
	Method Decode:	Not reported		
	Tacinty County.			
	envid:	S113171393		
	Year:	2005		
	GEPAID:	CAP000158378		
	Contact:	KATHLEEN SWEET		
	l elephone:	2139227303		
	Mailing Name:			
	Mailing City St Zin:	LOS ANGELES CA 90012		
	Gen County:	Not reported		
	TSD FPA ID	CAT080013352		
	TSD County:	Not reported		
	Waste Category:	Aqueous solution with total organic residues less than 10 percent		
	Disposal Method:	Not reported		
	Tons:	2.91		
	Cat Decode:	Not reported		
	Method Decode:	Not reported		

Database(s)

EDR ID Number EPA ID Number

#### SOTO STATION (Continued)

Facility County:	Los Angeles
envid:	S113171393
Year:	2004
GEPAID:	CAP000158378
Contact:	KATHLEEN SWEET
Telephone:	2139227303
Mailing Name:	Not reported
Mailing Address:	ONE GATEWAY PLAZA
Mailing City, St, Zip:	LOS ANGELES, CA 90012
Gen County:	Not reported
TSD EPA ID:	CAT000646117
TSD County:	Not reported
Waste Category:	Contaminated soil from site clean-up
Disposal Method:	Disposal, Land Fill
Tons:	257.89
Cat Decode:	Not reported
Method Decode:	Not reported
Facility County:	Los Angeles
envid:	S113171393
Year:	2004
GEPAID:	CAP000158378
Contact:	KATHLEEN SWEET
Telephone:	2139227303
Mailing Name:	Not reported
Mailing Address:	ONE GATEWAY PLAZA
Mailing City,St,Zip:	LOS ANGELES, CA 90012
Gen County:	Not reported
TSD EPA ID:	CAT000646117
TSD County:	Not reported
Waste Category:	Contaminated soil from site clean-up
Disposal Method:	Not reported
Tons:	121.36
Cat Decode:	Not reported
Method Decode:	Not reported
Facility County:	Los Angeles

Click this hyperlink while viewing on your computer to access 1 additional CA\_HAZNET: record(s) in the EDR Site Report.

#### SOTO STATION A2 2322 E 1ST ST

#### < 1/8 LOS ANGELES, CA 90033

1 ft.

#### Site 2 of 11 in cluster A

Relative:	HAZNET:	
Lower	envid:	S113171389
	Year:	2004
Actual:	GEPAID:	CAP000158014
300 ft.	Contact:	KATHLEEN SWEET
	Telephone:	2139227303
	Mailing Name:	Not reported
	Mailing Address:	ONE GATEWAY PLAZA
	Mailing City,St,Zip:	LOS ANGELES, CA 90012
	Gen County:	Not reported
	TSD EPA ID:	NVT330010000

HAZNET S113171389 N/A

### S113171393

Database(s)

EDR ID Number EPA ID Number

	SOTO STATION (Contin	nued)		S113171389
	TSD County: Waste Category: Disposal Method: Tons: Cat Decode: Method Decode: Facility County:	Not reported Other inorganic solid waste Disposal, Other 233.45 Not reported Not reported Los Angeles		
	envid: Year: GEPAID: Contact: Telephone: Mailing Name: Mailing Address: Mailing City,St,Zip: Gen County: TSD EPA ID: TSD County: Waste Category: Disposal Method: Tons: Cat Decode: Method Decode: Facility County:	S113171389 2004 CAP000158014 KATHLEEN SWEET 2139227303 Not reported ONE GATEWAY PLAZA LOS ANGELES, CA 90012 Not reported NVT330010000 Not reported Other inorganic solid waste Disposal, Land Fill 53.93 Not reported Not reported Los Angeles		
A3 NNE < 1/8 0.005 mi. 25 ft	FISHER A H 2336 E 1ST TER LOS ANGELES, CA Site 3 of 11 in cluster A		EDR Hist Auto	1009084805 N/A
A3 NNE < 1/8 0.005 mi. 25 ft. Relative:	FISHER A H 2336 E 1ST TER LOS ANGELES, CA Site 3 of 11 in cluster A EDR Hist Auto		EDR Hist Auto	1009084805 N/A
A3 NNE < 1/8 0.005 mi. 25 ft. Relative: Lower Actual: 300 ft.	FISHER A H 2336 E 1ST TER LOS ANGELES, CA Site 3 of 11 in cluster A EDR Hist Auto Year: Name: 1942 FISHER A B	4	EDR Hist Auto Type: GASOLINE AND OIL SERVICE STATIONS	1009084805 N/A
A3 NNE < 1/8 0.005 mi. 25 ft. Relative: Lower Actual: 300 ft. A4 NNE < 1/8 0.005 mi. 26 ft.	FISHER A H 2336 E 1ST TER LOS ANGELES, CA Site 3 of 11 in cluster A EDR Hist Auto Year: Name: 1942 FISHER A H ENDLICH EDW 2332 E 1ST TER LOS ANGELES, CA Site 4 of 11 in cluster A	-	EDR Hist Auto Type: GASOLINE AND OIL SERVICE STATIONS EDR Hist Auto	1009084805 N/A 1009079220 N/A
A3 NNE < 1/8 0.005 mi. 25 ft. Relative: Lower Actual: 300 ft. A4 NNE < 1/8 0.005 mi. 26 ft. Relative:	FISHER A H 2336 E 1ST TER LOS ANGELES, CA Site 3 of 11 in cluster A EDR Hist Auto Year: Name: 1942 FISHER A H ENDLICH EDW 2332 E 1ST TER LOS ANGELES, CA Site 4 of 11 in cluster A EDR Hist Auto	4	EDR Hist Auto Type: GASOLINE AND OIL SERVICE STATIONS EDR Hist Auto	1009084805 N/A 1009079220 N/A

	MAP FINDINGS		
Site		Database(s)	EDR ID Number EPA ID Number
SUN CHEW 2318 E 1ST TER LOS ANGELES, CA		EDR Hist Cleaner	1009190403 N/A
Site 5 of 11 in cluster A			
EDR Hist Cleaner			
Year: Name: 1937 SUN CHEW	Type: LAUNDRIES CHINESE	:	
GUADALAJARA AUTO SAL 111 S SOTO ST LOS ANGELES, CA 90033	ES	UST SWEEPS UST HIST UST	U001561353 N/A
Site 6 of 11 in cluster A			
UST: Facility ID: Permitting Agency: Latitude: Longitude:	24318 LOS ANGELES, CITY OF 34.04347 -118.20994		
SWEEPS UST: Status: Comp Number: Number: Board Of Equalization: Referral Date: Action Date: Created Date: Owner Tank Id: SWRCB Tank Id: Tank Status: Capacity: Active Date: Tank Use: STG: Content: Number Of Tanks:	Active 1803 9 44-011976 01-22-93 03-24-94 02-29-88 Not reported 19-050-001803-000001 A 10000 04-20-88 M.V. FUEL P REG UNLEADED 3 Active		
Comp Number: Number: Board Of Equalization: Referral Date: Action Date: Created Date: Owner Tank Id: SWRCB Tank Id: Tank Status: Capacity: Active Date: Tank Use: STG: Content:	1803 9 44-011976 01-22-93 03-24-94 02-29-88 Not reported 19-050-001803-000002 A 10000 04-20-88 M.V. FUEL P REG UNLEADED		
Number Of Tanks: Status:	νοι reported		

Database(s)

EDR ID Number EPA ID Number

U001561353

#### **GUADALAJARA AUTO SALES (Continued)**

Comp Number: 1803 Number: 9 Board Of Equalization: 44-011976 Referral Date: 01-22-93 Action Date: 03-24-94 Created Date: 02-29-88 Owner Tank Id: Not reported SWRCB Tank Id: 19-050-001803-000003 Tank Status: А Capacity: 10000 04-20-88 Active Date: M.V. FUEL Tank Use: STG: Ρ Content: **REG UNLEADED** Number Of Tanks: Not reported HIST UST: File Number: 00026352 URL: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00026352.pdf Region: STATE Facility ID: 0000029478 Facility Type: Gas Station Other Type: Not reported Contact Name: Not reported Telephone: 2132643556 **Owner Name:** ANGEL M. BECERRA Owner Address: 111 S. SOTO ST. Owner City, St, Zip: LOS ANGELES, CA 90033 Total Tanks: 0003 Tank Num: 001 Container Num: 1 Year Installed: Not reported Tank Capacity: 00010000 Tank Used for: PRODUCT UNLEADED Type of Fuel: **Container Construction Thickness:** Not reported Leak Detection: None 002 Tank Num: Container Num: 2 Year Installed: Not reported Tank Capacity: 00010000 PRODUCT Tank Used for: Type of Fuel: REGULAR **Container Construction Thickness:** Not reported Leak Detection: None Tank Num: 003 Container Num: 3 Year Installed: Not reported 00010000 Tank Capacity: Tank Used for: PRODUCT Type of Fuel: PREMIUM **Container Construction Thickness:** Not reported Leak Detection: None

Direction Distance Elevation	Site	۲		Database(s)	EDR ID Number EPA ID Number
	GUADALAJARA AUTO	SALES (Continued)			U001561353
A7 East < 1/8 0.010 mi.	GUADALAJARA AUTO S 111 S SOTO ST LOS ANGELES, CA 900	SALES 33		CA FID UST	S101617362 N/A
51 ft.	Site 7 of 11 in cluster A				
Actual: 301 ft.	Facility ID: Regulated By: Regulated ID: Cortese Code: SIC Code: Facility Phone: Mail To: Mailing Address: Mailing Addresss: Mailing Addresss 2: Mailing City,St,Zip: Contact: Contact Phone: DUNs Number: NPDES Number: EPA ID: Comments: Status:	19036404 UTNKA 00029478 Not reported Not reported 2132643556 Not reported 111 S SOTO ST Not reported LOS ANGELES 900330000 Not reported Not reported Not reported Not reported Not reported Not reported Not reported Not reported Not reported Active			
A8 NNW < 1/8 0.017 mi.	BEITCH HARRY 2306 E 1ST TER LOS ANGELES, CA			EDR Hist Cleaner	1009192295 N/A
89 ft.	Site 8 of 11 in cluster A				
Relative:	EDR Hist Cleaner				
Actual: 300 ft.	Year: Name: 1942 BEITCH HA	RRY	Type: LAUNDRIES HAND		
A9 NNW < 1/8 0.018 mi.	NOTOMI H 2304 E 1ST TER LOS ANGELES, CA			EDR Hist Cleaner	1009189491 N/A
90 IL.	EDR Hist Cleaner				
Lower Actual:	Year: Name: 1929 NOTOMI H		Type: CLOTHES PRESSERS	CLEANERS AND REPA	IRERS

1929 NOTOMI H

1933

1937

NOTOMI HIROSHI

NOTOMI H

300 ft.

MAP FINDINGS

Map ID

CLOTHES PRESSERS CLEANERS AND REPAIRERS

CLOTHES PRESSERS AND CLEANERS

CLOTHES PRESSERS AND CLEANERS

Map ID				MAP FIND	INGS		
Direction Distance Elevation	Site		4			Database(s)	EDR ID Number EPA ID Number
A10 ENE < 1/8 0.032 mi. 167 ft.	BINDER BR 100 N SOTO LOS ANGEI Site 10 of 1 <sup>1</sup>	OS ) ST LES, CA 1 in cluster A				EDR Hist Auto	1009079871 N/A
Relative: Lower	EDR Hist	Auto					
Actual: 300 ft.	Year: 1933 1937	Name: BINDER BROS BINDER BROS			Type: GASOLINE AND OIL SE GASOLINE AND OIL SE	RVICE STATIONS RVICE STATIONS	
A11 ENE < 1/8 0.040 mi. 210 ft	BINDER BR 2401 E 1ST LOS ANGEI Site 11 of 1	OS TER LES, CA 1 in cluster A				EDR Hist Auto	1009080600 N/A
Relative:	EDR Hist	Auto					
Lower Actual: 300 ft.	Year: 1929	Name: BINDER BROS			Type: GASOLINE AND OIL SE	RVICE STATION	
B12 East < 1/8 0.041 mi.	ASOO S 2404 E 1ST LOS ANGEI	TER _ES, CA				EDR Hist Cleaner	1009187797 N/A
217 ft.	Site 1 of 4 in	n cluster B					
Actual: 300 ft.	Year: 1937	Name: ASOO S			Type: CLOTHES PRESSERS A	AND CLEANERS	
B13 NE < 1/8 0.046 mi.	SUPRUNUK 110 N SOTO LOS ANGEI	YOUART ) ST LES, CA				EDR Hist Auto	1009080802 N/A
241 ft.	Site 2 of 4 in cluster B						
Relative: Higher		Auto			-		
Actual: 304 ft.	Year: 1929 1933 1937	Name: SUPRUNUK Y EDELSTEIN SA SIGAL MORRIS	OUART ML		AUTOMOBILE REPAIRI AUTOMOBILE REPAIRI AUTOMOBILE REPAIRI AUTOMOBILE REPAIRI	NG AND SERVICE STA NG NG	TIONS

Database(s)

EDR ID Number EPA ID Number

C14 NW < 1/8 0.048 mi. 255 ft.	MAYFAIR CLEANERS 2234 FIRST ST LOS ANGELES, CA 90033 Site 1 of 7 in cluster C	RCRA-SQG DRYCLEANERS HAZNET	1000227714 CAD981621972
Relative: Lower Actual: 299 ft.	RCRA-SQG: Date form received by agency: Facility name: Facility address:	:09/01/1996 MAYFAIR CLEANERS 2234 FIRST ST LOS ANGELES, CA 90033	
	EPA ID: Mailing address: Contact:	CAD981621972 FIRST ST LOS ANGELES, CA 90033 Not reported	
	Contact address: Contact country: Contact telephone:	Not reported Not reported US Not reported	
	Contact email: EPA Region: Classification: Description:	Not reported 09 Small Small Quantity Generator Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time	of
	Owner/Operator Summary: Owner/operator name: Owner/operator address:	GUADALUPE VILLA NOT REQUIRED	
	Owner/operator country: Owner/operator telephone: Legal status: Owner/Operator Type: Owner/Op start date: Owner/Op end date:	NOT REQUIRED, ME 99999 Not reported (415) 555-1212 Private Owner Not reported Not reported	
	Owner/operator name: Owner/operator address:	NOT REQUIRED NOT REQUIRED NOT REQUIRED, ME 99999	
	Owner/operator country: Owner/operator telephone: Legal status: Owner/Operator Type: Owner/Op start date: Owner/Op end date:	Not reported (415) 555-1212 Private Operator Not reported Not reported	
	Handler Activities Summary: U.S. importer of hazardous wa Mixed waste (haz. and radioad Recycler of hazardous waste: Transporter of hazardous wast Treater, storer or disposer of H Underground injection activity: On-site burner exemption: Furnace exemption:	iste: No No No IW: No No No No	

Database(s)

EDR ID Number EPA ID Number

#### 1000227714

### MAYFAIR CLEANERS (Continued)

Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel markete	er to burner: No
Used oil Specification	n marketer: No
Used oil transfer faci	lity: No
Used oil transporter:	No
Violation Status:	No violations found
DRYCLEANERS:	
EPA ld:	CAL000307447
NAICS Code:	81232
NAICS Description:	Drycleaning and Laundry Services (except Coin-Operated)
SIC Code:	7211
SIC Description:	Power Laundries, Family and Commercial
Create Date:	05/30/2006
Facility Active:	No
Inactive Date:	06/30/2008
Facility Addr2:	Not reported
Owner Name:	MARTHA VILLA
Owner Address:	2234 E 1ST ST
Owner Address 2:	Not reported
Owner Telephone:	3232695360
Contact Name:	MARTHA VILLA
Contact Address:	2234 E 1ST ST
Contact Address 2:	Not reported
Contact Telephone:	3232695360
Mailing Name:	Not reported
Mailing Address 1:	2234 E 1ST ST
Mailing Address 2:	Not reported
Mailing City:	LOS ANGELES
Mailing State:	CA
Mailing Zip:	90033
Owner Fax:	Not reported
Region Code:	3
HAZNET:	
envid:	1000227714
Year:	2006
GEPAID:	CAD981621972
Contact:	M VILLA & CRISTOBAL VERGARA
Telephone:	3232695360
Mailing Name:	Not reported
Mailing Address:	2234 E 1ST ST
Mailing City,St,Zip:	LOS ANGELES, CA 900333902
Gen County:	Not reported
TSD EPA ID:	NVR000076158
TSD County:	Not reported
waste Category:	Haiogenated solvents (chlorotorms, methyl chloride, perchloroethylene,
Disposal Mathad	eu) Decycler
Louis.	U.ZZ
Method Decode	Not reported
Facility County:	
. donity Oburity.	

Database(s)

EDR ID Number EPA ID Number

### MAYFAIR CLEANERS (Continued)

envid:	1000227714
Year:	2006
GEPAID:	CAD981621972
Contact:	M VILLA & CRISTOBAL VERGARA
Telephone:	3232695360
Mailing Name	Not reported
Mailing Address:	
Mailing City St Zing	
	LOS ANGELES, CA 900333902
Gen County:	Not reported
ISD EPAID:	NVR000076158
TSD County:	Not reported
Waste Category:	Not reported
Disposal Method:	Recycler
Tons:	Not reported
Cat Decode:	Not reported
Method Decode:	Not reported
Facility County:	Los Angeles
envid:	1000227714
Year:	2006
GEPAID:	CAD981621972
Contact:	M VILLA & CRISTOBAL VERGARA
Telephone:	3232695360
Mailing Name:	Not reported
Mailing Address:	2234 F 1ST ST
Mailing City St Zip	LOS ANGELES, CA 900333902
Gen County:	Not reported
TSD FPA ID	NVR000076158
TSD County:	Not reported
Waste Category:	Not reported
Disposal Method	Recycler
Tone:	Net reported
Cot Deceder	Not reported
Mathad Dacada	Not reported
Facility County:	Los Angeles
envid:	1000227714
Year:	2006
GEPAID:	CAD981621972
Contact:	M VILLA & CRISTOBAL VERGARA
Telephone:	3232695360
Mailing Name:	Not reported
Mailing Address:	2234 E 1ST ST
Mailing City, St, Zip:	LOS ANGELES, CA 900333902
Gen County:	Not reported
TSD EPA ID:	NVR000076158
TSD County:	Not reported
Waste Category:	Halogenated solvents (chloroforms, methyl chloride, perchloroethylene,
riacie calegory:	etc)
Disposal Method:	Recycler
Tons:	0.22
Cat Decode:	Not reported
Method Decode	Not reported
Facility County:	Los Angeles
r admity County.	Lus Angolus
envid:	1000227714
Year:	2005

#### 1000227714
Database(s)

EDR ID Number EPA ID Number

# MAYFAIR CLEANERS (Continued)

2010 2011

KWIK CLEANERS

GEPAID:	CAD981621972
Contact:	M VILLA & CRISTOBAL VERGARA
Telephone:	3232695360
Mailing Name:	Not reported
Mailing Address:	2234 E 1ST ST
Mailing City,St,Zip:	LOS ANGELES, CA 900333902
Gen County:	Not reported
TSD EPA ID:	NVR000076158
TSD County:	Not reported
Waste Category:	Not reported
Disposal Method:	Not reported
Tons:	Not reported
Cat Decode:	Not reported
Method Decode:	Not reported
Facility County:	Los Angeles

# <u>Click this hyperlink</u> while viewing on your computer to access 27 additional CA\_HAZNET: record(s) in the EDR Site Report.

C15 NW < 1/8 0.048 mi.	KWIK CLEA 2234 E 1ST LOS ANGEI	NERS ST LES, CA 90033	EDR Hist Cleaner	1009126968 N/A
255 ft.	Site 2 of 7 in	n cluster C		
Relative: Lower	EDR Hist	Cleaner		
	Year:	Name:	Туре:	
Actual:	1993	KWIK CLEANERS	Drycleaning Plants, Except Rugs	
299 ft.	1994	KWIK CLEANERS	Drycleaning Plants, Except Rugs	
	1995	KWIK CLEANERS	Not reported	
	1995	KWIK CLEANERS	Drycleaning Plants, Except Rugs	
	1996	KWIK CLEANERS	Drycleaning Plants, Except Rugs	
	1997	KWIK CLEANERS	Drycleaning Plants, Except Rugs	
	1998	KWIK CLEANERS	Drycleaning Plants, Except Rugs	
	1999	KWIK CLEANERS	Drycleaning Plants, Except Rugs	
	2000	KWIK CLEANERS	Drycleaning Plants, Except Rugs	
	2001	KWIK CLEANERS	Drycleaning Plants, Except Rugs	
	2002	KWIK CLEANERS	Drycleaning Plants, Except Rugs	
	2003	KWIK CLEANERS	Drycleaning Plants, Except Rugs	
	2004	KWIK CLEANERS	Drycleaning Plants, Except Rugs	
	2005	KWIK CLEANERS	Drycleaning Plants, Except Rugs	
	2006	KWIK CLEANERS	Drycleaning Plants, Except Rugs	
	2007	KWIK CLEANERS	Drycleaning Plants, Except Rugs	
	2008	KWIK CLEANERS	Drycleaning Plants, Except Rugs	
	2009	KWIK CLEANERS	Drycleaning Plants, Except Rugs	
	2010	KWIK CLEANERS	Drycleaning Plants, Except Rugs	

Drycleaning Plants, Except Rugs

Database(s)

EDR ID Number EPA ID Number

C16 NNW < 1/8 0 052 mi	MONRREAL MOTOR SERVICE 2239 E 1ST ST LOS ANGELES, CA 90023	RCRA-	SQG	1000368724 CAD981677610
276 ft.	Site 3 of 7 in cluster C			
276 ft. Relative: Lower Actual: 300 ft.	RCRA-SQG: Date form received by agency Facility name: Facility address: EPA ID: Mailing address: Contact: Contact country: Contact country: Contact telephone: Contact telephone: Contact email: EPA Region: Classification: Description:	: 10/06/1986 MONRREAL MOTOR SERVICE 2239 E 1ST ST LOS ANGELES, CA 90023 CAD981677610 E 1ST ST LOS ANGELES, CA 90023 ENVIRONMENTAL MANAGER 2239 E 1ST ST LOS ANGELES, CA 90023 US (213) 262-6860 Not reported 09 Small Small Quantity Generator Handler: generates more than 100 and less than 1000 kg of hazard waste during any calendar month and accumulates less than 6000 J	ous kg of	
		hazardous waste at any time; or generates 100 kg or less of hazard waste during any calendar month, and accumulates more than 1000 hazardous waste at any time	lous 0 kg of	
	Owner/Operator Summary:			
	Owner/operator name: Owner/operator address:	NOT REQUIRED NOT REQUIRED NOT REQUIRED, ME 99999		
	Owner/operator country: Owner/operator telephone:	Not reported (415) 555-1212		
	Owner/Operator Type: Owner/Op start date:	Operator Not reported		
	Owner/Op end date:	Not reported		
	Owner/operator name: Owner/operator address:	RAFAEL LOPEZ MONRREAL NOT REQUIRED NOT REQUIRED, ME 99999		
	Owner/operator country: Owner/operator telephone: Legal status: Owner/Operator Type:	Not reported (415) 555-1212 Private Owner		
	Owner/Op start date: Owner/Op end date:	Not reported Not reported		
	Handler Activities Summary: U.S. importer of hazardous wa Mixed waste (haz. and radioad Recycler of hazardous waste: Transporter of hazardous was Treater, storer or disposer of H Underground injection activity: On-site burner exemption: Furnace exemption:	aste: No ctive): No No te: No tW: No : No No No		

Database(s)

EDR ID Number EPA ID Number

1000368724

# MONRREAL MOTOR SERVICE (Continued)

Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status:

No violations found

C17 NNW < 1/8	MURRY LEFKOWITZ 2239 E 1ST ST LOS ANGELES, CA 90033	3	SWEEPS UST CA FID UST	S101584699 N/A
276 ft.	Site 4 of 7 in cluster C			
Relative: Lower Actual: 300 ft.	SWEEPS UST: Status: Comp Number: Number: Board Of Equalization Referral Date: Action Date: Created Date: Owner Tank Id: SWRCB Tank Id: Tank Status: Capacity: Active Date: Tank Use: STG: Content: Number Of Tanks:	Not reported 5158 Not reported Not reported		
	CA FID UST: Facility ID: Regulated By: Regulated ID: Cortese Code: SIC Code: Facility Phone: Mail To: Mailing Address: Mailing Address 2: Mailing City,St,Zip: Contact: DUNS Number: EPA ID: Comments: Status:	19014542 JTNKI Not reported Not reported 2132636711 Not reported 2239 E 1ST ST Not reported _OS ANGELES 900330000 Not reported Not reported		

Database(s)

EDR ID Number EPA ID Number

C18 NNW < 1/8	MONRREAL MOTOR SERVICE 2239 E 1ST ST LOS ANGELES, CA 90023	RCRA-SQG FINDS ECHO	1000134634 CAD982013617
276 ft.	Site 5 of 7 in cluster C		
Relative: Lower Actual: 300 ft.	RCRA-SQG: Date form received by agency Facility name: Facility address: EPA ID: Mailing address: Contact: Contact address: Contact country: Contact country: Contact telephone: Contact email: EPA Region: Classification: Description:	y: 07/13/1987 C V TRANSMISSION 2239 E 1ST ST LOS ANGELES, CA 90033 CAD982013617 E FIRST ST LOS ANGELES, CA 90033 ENVIRONMENTAL MANAGER 2239 E FIRST ST LOS ANGELES, CA 90033 US (213) 268-5219 Not reported 09 Small Small Quantity Generator Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of	f
	Owner/Operator Summary: Owner/operator name: Owner/operator address: Owner/operator country: Owner/operator telephone: Legal status: Owner/Operator Type: Owner/Op start date: Owner/Op end date: Owner/Operator name: Owner/operator address:	CRISOFORO R ALEMAN NOT REQUIRED NOT REQUIRED, ME 99999 Not reported (415) 555-1212 Private Owner Not reported Not reported NOT REQUIRED NOT REQUIRED	
	Owner/operator country: Owner/operator telephone: Legal status: Owner/Operator Type: Owner/Op start date: Owner/Op end date: Handler Activities Summary: U.S. importer of hazardous was Mixed waste (haz. and radioa Recycler of hazardous wase: Transporter of hazardous was Treater, storer or disposer of Underground injection activity On-site burner exemption: Furnace exemption:	NOT REQUIRED, ME 99999 Not reported (415) 555-1212 Private Operator Not reported Not reported Not reported Not reported Ste: No Ste: No HW: No ': No No No No No	

MAP FINDINGS

Database(s)

EDR ID Number EPA ID Number

	MONRREAL MOTOR	SERVICE (Continued	I)		1000134634
	Used oil fuel bur	ner: No	)		
	Used oil process	or: No	)		
	User oil refiner:	No	)		
	Used oil fuel mar	keter to burner: No	)		
	Used oil Specific	ation marketer: No	)		
	Used oil transfer	facility: No	)		
	Used oil transpor	ter: No	)		
	Violation Status:	No violat	ions found		
	FINDS:				
	Registry ID:	1100027	47822		
	Environmental In	terest/Information Syst	em		
		RCRAInfo is a nation	al information sy	stem that supports the Resource	
		Conservation and Re	covery Act (RCF	RA) program through the tracking of	
		events and activities	related to facilitie	es that generate, transport,	
		and treat, store, or dis	spose of hazard	ous waste. RCRAInfo allows RCRA	
		program staff to track	the notification,	permit, compliance, and	
		corrective action activ	vities required ur	nder RCRA.	
	Registry ID:	1100095	42227		
	Environmental In	terest/Information Syst	em		
		RCRAInfo is a nation	al information sy	stem that supports the Resource	
		Conservation and Re	covery Act (RCF	RA) program through the tracking of	
		events and activities	related to facilitie	es that generate, transport,	
		and treat, store, or dis	spose of hazard	ous waste. RCRAInfo allows RCRA	
		program staff to track	the notification,	permit, compliance, and	
		corrective action activ	vities required ur	nder RCRA.	
		additional FINDS: def	ail in the EDR S	ite Report.	
	50110				
	ECHU:		1000124624		
	Erivia. Registry ID:		1000134034		
			110002747622	any/datailed facility report2fid=110002747822	
	DFR URL.		http://echo.epa	gov/detailed-raciity-report?iid=110002747822	
	Envid:		1000134634		
	Registry ID:		110009542227		
	DFR URL:		http://echo.epa	gov/detailed-facility-report?fid=110009542227	
C19	FIRST & BREED SUP	ER SERVICE		EDR Hist Auto	1009078433
NNW	2239 E FIRST				N/A
< 1/8	LOS ANGELES, CA	<del>)</del> 0033			
0.052 mi. 276 ft.	Site 6 of 7 in cluster	C			
Relative:	EDR Hist Auto				
Lower	Year: Name			Type:	
Actual:	1929 WRIGHT	DG		GASOLINE AND OIL SERVICE STATION	
300 ft.	1942 STERNF	ELD SAML		GASOLINE AND OIL SERVICE STATIONS	
	1969 FIRST &	BREED SUPER SERV	/ICE	Gasoline Service Stations	
	1970 FIRST &	BREED SUPER SERV	/ICE	Gasoline Service Stations	

Database(s)

EDR ID Number EPA ID Number

1009078433

#### FIRST & BREED SUPER SERVICE (Continued)

1971 **FIRST & BREED SUPER SERVICE** 1972 **FIRST & BREED SUPER SERVICE** 1973 **FIRST & BREED SUPER SERVICE** 1974 **FIRST & BREED SUPER SERVICE** 1975 FIRST & BREED MOBILE CO 1975 **FIRST & BREED SUPER SERVICE** 1976 FIRST & BREED MOBILE CO FIRST & BREED MOBILE CO 1977 1978 **FIRST & BREED MOBILE CO** 1979 FIRST & BREED MOBILE CO FIRST & BREED MOBILE CO 1979 1980 FIRST & BREED MOBILE CO 1982 FIRST & BREED MOBILE CO 1989 TRANSMISSION AUTO REPAIR 1989 HENRY RADIATOR 1989 MARLENES MUFFLER SHOP 1989 MONRREAL MOTOR SERVICE 1989 MONREAL MOTOR SERVICE 1990 MONREAL MOTOR SERVICE 1991 MONRREAL MOTOR SERVICE 1991 HENRY RADIATOR 1991 MARLENES MUFFLER SHOP 1991 TRANSMISSION AUTO REPAIR 1991 MONREAL MOTOR SERVICE 1992 MARLENES MUFFLER SHOP 1992 HENRY RADIATOR 1992 MONRREAL MOTOR SERVICE 1992 MONREAL MOTOR SERVICE 1992 TRANSMISSION AUTO REPAIR 1993 TRANSMISSION AUTO REPAIR 1993 MARLENES MUFFLER SHOP 1993 HENRY RADIATOR MONRREAL MOTOR SERVICE 1993 1993 MONREAL MOTOR SERVICE 1994 TRANSMISSION AUTO REPAIR 1994 HENRY RADIATOR 1994 MONRREAL MOTOR SERVICE 1994 MONREAL MOTOR SERVICE 1994 MARLENES MUFFLER SHOP 1995 MARLENES MUFFLER SHOP 1995 TRANSMISSION AUTO REPAIR 1995 HENRY RADIATOR 1995 MONREAL MOTOR SERVICE 1996 HENRY RADIATOR 1996 MARLENES MUFFLER SHOP 1996 CD TRANSMISSION 1997 HENRY RADIATOR 1997 MARLENES MUFFLER SHOP 1997 CD TRANSMISSION 1998 CD TRANSMISSION 1998 HENRY RADIATOR 1998 MARLENES MUFFLER SHOP 1999 HENRY RADIATOR 1999 CD TRANSMISSION 1999 MARLENES MUFFLER SHOP 2000 MARLENES MUFFLER SHOP 2000 HENRY RADIATOR

**Gasoline Service Stations** Gasoline Service Stations **Gasoline Service Stations Gasoline Service Stations** Gasoline Service Stations **Gasoline Service Stations Gasoline Service Stations** Gasoline Service Stations **Gasoline Service Stations Gasoline Service Stations Gasoline Service Stations Gasoline Service Stations Gasoline Service Stations** General Automotive Repair Shops

Map ID	
Direction	
Distance	
Elevation	Site

Database(s)

EDR ID Number EPA ID Number

#### FIRST & BREED SUPER SERVICE (Continued)

2000	CD TRANSMISSION
2001	HENRY RADIATOR
2001	MARLENES MUFFLER SHOP
2001	CD TRANSMISSION
2002	CD TRANSMISSION
2002	HENRY RADIATOR
2002	MARLENES MUFFLER SHOP
2003	MARLENES MUFFLER SHOP
2003	CD TRANSMISSION
2003	HENRY RADIATOR
2004	MARLENES MUFFLER SHOP
2004	HENRY RADIATOR
2005	MARLENES MUFFLER SHOP
2006	MARLENES MUFFLER SHOP
2007	MARLENES MUFFLER SHOP
2008	MARLENES MUFFLER SHOP
2009	MARLENES MUFFLER SHOP
2010	MARLENES MUFFLER SHOP
2011	MARLENES MUFFLER SHOP
2012	MARLENES MUFFLER SHOP
2013	MARLENES MUFFLER SHOP

General Automotive Repair Shops General Automotive Repair Shops

#### 1009078433

B20 East < 1/8 0.063 mi.	AVILA JAIR 2420 E 1ST LOS ANGE	RO A ST LES, CA 90033	EDR Hist Cleaner	1018443787 N/A
333 ft.	Site 3 of 4 i	n cluster B		
Relative: Lower	EDR Hist	Cleaner		
	Year:	Name:	Туре:	
Actual:	2006	AVILA JAIRO A	Carpet And Upholstery Cleaning	
300 ft.	2007	AVILA JAIRO A	Carpet And Upholstery Cleaning	
	2008	AVILA JAIRO A	Carpet And Upholstery Cleaning	
	2009	AVILA JAIRO A	Carpet And Upholstery Cleaning	
	2010	AVILA JAIRO A	Carpet And Upholstery Cleaning	
	2011	AVILA JAIRO A	Carpet And Upholstery Cleaning	
	2012	AVILA JAIRO A	Carpet And Upholstery Cleaning	
	2013	AVILA JAIRO A	Carpet And Upholstery Cleaning	
	2014	AVILA JAIRO A	Carpet And Upholstery Cleaning	
C21	TEMKIN SA	ML	EDR Hist Cleaner	1009189620

NW < 1/8 0.067 mi	2224 E 1ST TER LOS ANGELES, CA	N/A
353 ft.	Site 7 of 7 in cluster C	
Relative: Lower	EDR Hist Cleaner	
	Year: Name:	Туре:
Actual: 299 ft.	1933 TEMKIN SAML 1937 TEMKIN SAML	CLOTHES PRESSERS AND CLEANERS CLOTHES PRESSERS AND CLEANERS

		[=			
Map ID Direction			MAP FINDINGS		
Distance Elevation	Site		[	Database(s)	EDR ID Number EPA ID Number
B22 East < 1/8 0.075 mi.	GOLDSTEIN 2423 E 1ST LOS ANGEI	N SAML TER LES, CA	EDR H	list Cleaner	1009189860 N/A
398 ft. Relative:	Site 4 of 4 in EDR Hist	n cluster B Cleaner			
Actual: 300 ft.	Year: 1933 1937	Name: GOLDSTEIN SAN GOLDSTEIN SAN	Type: IL CLOTHES PRESSERS AND CLEA IL CLOTHES PRESSERS AND CLEA	NERS NERS	
D23 WNW < 1/8 0.092 mi.	LA BEN FRA 2200 E 1ST LOS ANGEI	ANKLIN LIBRARY ST LES, CA 90033	I	 RCRA-SQG FINDS ECHO	1000162455 CAD981989932
484 ft.	Site 1 of 5 in	n cluster D			
Lower	Date fo	orm received by age	ency: 03/25/1987 LA BEN FRANKLIN LIBRARY		
Actual: 298 ft.	Facility Facility EPA IE Mailing Contac Contac Contac Contac EPA R Classif Descrij	address: addres	2200 E 1ST ST LOS ANGELES, CA 90033 CAD981989932 200 N MAIN RM EIGHTH HUNDREDCH LOS ANGELES, CA 90012 ENVIRONMENTAL MANAGER 2200 E 1ST ST LOS ANGELES, CA 90033 US (213) 485-7527 Not reported 09 Small Small Quantity Generator Handler: generates more than 100 and less than 1000 kg of waste during any calendar month and accumulates less than hazardous waste at any time; or generates 100 kg or less of waste during any calendar month, and accumulates more tha hazardous waste at any time	hazardous 1 6000 kg of hazardous an 1000 kg of	
	Owner/Op Owner, Owner, Owner, Legal s Owner, Owner, Owner, Owner, Owner, Owner, Legal s Owner, Owner	operator Summary: /operator name: /operator address: /operator country: /operator telephone status: /Operator Type: /Op start date: /operator name: /operator name: /operator address: /operator country: /operator telephone status: /Operator Type: /Op start date:	CITY OF LOS ANGELES NOT REQUIRED, ME 99999 Not reported (415) 555-1212 Municipal Owner Not reported Not reported NOT REQUIRED NOT REQUIRED NOT REQUIRED NOT REQUIRED, ME 99999 Not reported :: (415) 555-1212 Municipal Operator Not reported		

Database(s)

EDR ID Number EPA ID Number

1000162455

#### LA BEN FRANKLIN LIBRARY (Continued)

Owner/Op end date:	lot reported
--------------------	--------------

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

#### FINDS:

Registry ID:

### 110002768229

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

<u>Click this hyperlink</u> while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid: Registry ID: DFR URL: 1000162455 110002768229 http://echo.epa.gov/detailed-facility-report?fid=110002768229

24 East < 1/8 0.110 mi. 580 ft.	COHEN SAI 2501 E 1ST LOS ANGEI	ML TER LES, CA	EDR Hist Cleaner	1009189053 N/A
Relative: Lower	EDR Hist	Cleaner		
	Year:	Name:	Туре:	
Actual:	1924	COHEN SAML	CLOTHES CLEANERS PRESSERS AND DYERS	5
300 ft.	1933	COHEN SAML	CLOTHES PRESSERS AND CLEANERS	
	1937	COHEN SAML	CLOTHES PRESSERS AND CLEANERS	
	1980	FASHION CLEANERS THE	Garment Pressing And Cleaners' Agents	
	1982	FASHION CLEANERS THE	Garment Pressing And Cleaners' Agents	
	1983	FASHION CLEANERS THE	Garment Pressing And Cleaners' Agents	

Database(s)

EDR ID Number EPA ID Number

1009189053

# COHEN SAML (Continued)

FASHION CLEANERS THE	Garment Pressing And Cleaners' Agents
FASHION CLEANERS THE	Garment Pressing And Cleaners' Agents
FASHION CLEANERS THE	Garment Pressing And Cleaners' Agents
FASHION CLEANERS THE	Garment Pressing And Cleaners' Agents
FASHION CLEANERS	Laundry And Drycleaner Agents
FASHION CLEANERS	Laundry And Drycleaner Agents
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D25 WNW 1/8-1/4 0 133 mi	LA FIRE STATION 2127 E 1ST ST LOS ANGELES, CA 90012	RCRA NonGen / NL FINE ECH HAZNE	.R 1000229433 DS CAD981962277 IO
701 ft.	Site 2 of 5 in cluster D		
Relative: Lower	RCRA NonGen / NLR: Date form received by agend	cy:03/09/1987	
	Facility name:	LA FIRE STATION	
Actual:	Facility address:	2127 E 1ST ST	
300 ft.		LOS ANGELES, CA 90012	
	EPA ID:	CAD981962277	
	Mailing address:	200 N MAIN RM EIGHTH HUNDRED C	
	-	LOS ANGELES, CA 90012	
	Contact:	SHARI KUROKI	
	Contact address:	2127 E FIRST ST	
		LOS ANGELES. CA 90012	
	Contact country:	US	
	Contact telephone:	213-473-7748	
	Contact email:	Not reported	
	FPA Region:	09	
	Classification	Non-Generator	
	Description:	Handler: Non-Generators do not presently generate bazardous waste	
	Description.	Handler. Non Generators to not presently generate hazardous waste	
	Owner/Operator Summary:		
	Owner/operator name:	CITY OF LA	
	Owner/operator address:		
		NOT REQUIRED, ME 33333	
	Owner/operator country:		
	Owner/operator telephone:	(415) 555-1212	

99999

Database(s)

EDR ID Number EPA ID Number

#### LA FIRE STATION (Continued)

Legal status: Owner/Operator Type: Owner/Op start date: Owner/Op end date:	Municipal Owner Not reported Not reported
Owner/operator name: Owner/operator address: Owner/operator country: Owner/operator telephone: Legal status: Owner/Operator Type: Owner/Op start date: Owner/Op end date:	NOT REQUIRED NOT REQUIRED NOT REQUIRED, ME Not reported (415) 555-1212 Municipal Operator Not reported Not reported
Handler Activities Summary: U.S. importer of hazardous w Mixed waste (haz. and radioa Recycler of hazardous waste Transporter of hazardous waste Transporter of hazardous wa Treater, storer or disposer of Underground injection activity On-site burner exemption: Furnace exemption: Used oil fuel burner: Used oil fuel burner: Used oil fuel burner: Used oil refiner: Used oil refiner: Used oil specification market Used oil transfer facility:	vaste: No active): No ste: No HW: No HW: No y: No No No No No No ner: No ter: No

Violation Status:

### FINDS:

Registry ID: 110002756429

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

<u>Click this hyperlink</u> while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

No violations found

ECHO:

Envid: Registry ID: DFR URL: 1000229433 110002756429 http://echo.epa.gov/detailed-facility-report?fid=110002756429

HAZNET:

Database(s)

EDR ID Number EPA ID Number

#### LA FIRE STATION (Continued)

envid: 1000229433 Year: 2000 CAD981962277 GEPAID: Contact: SHARI KUROKI MGMT ANALYST Telephone: 2139783798 Mailing Name: Not reported 111 E 1ST ST ROOM 600 Mailing Address: Mailing City, St, Zip: LOS ANGELES, CA 900120000 Gen County: Not reported TSD EPA ID: CAD028409019 TSD County: Not reported Waste Category: Tank bottom waste **Disposal Method:** Treatment, Tank Tons: 1.87 Cat Decode: Not reported Method Decode: Not reported Facility County: Los Angeles envid: 1000229433 Year: 2000 CAD981962277 GEPAID: Contact: SHARI KUROKI MGMT ANALYST Telephone: 2139783798 Mailing Name: Not reported Mailing Address: 111 E 1ST ST ROOM 600 LOS ANGELES, CA 900120000 Mailing City, St, Zip: Gen County: Not reported TSD EPA ID: CAD028409019 TSD County: Not reported Waste Category: Tank bottom waste **Disposal Method:** Treatment, Tank Tons: 1.87 Cat Decode: Not reported Method Decode: Not reported Los Angeles Facility County: 1000229433 envid: Year: 1997 CAD981962277 GEPAID: DEPT OF GENERAL SERVICES Contact: Telephone: 2134855846 Mailing Name: Not reported Mailing Address: 200 N MAIN ST STE 1000 Mailing City, St, Zip: LOS ANGELES, CA 900124123 Not reported Gen County: TSD EPA ID: CAD099452708 TSD County: Not reported Waste Category: Waste oil and mixed oil **Disposal Method:** Recycler 2.0850 Tons: Cat Decode: Not reported Method Decode: Not reported Facility County: Los Angeles envid: 1000229433 1997 Year: GEPAID: CAD981962277

#### 1000229433

Map ID		MAP FIND
Distance		
Elevation	Site	
	LA FIRE STATION (Con	tinued)
	Contact:	DEPT OF GENERAL SERVICES
	Telephone:	2134855846
	Mailing Name:	Not reported
	Mailing Address:	200 N MAIN ST STE 1000
	Mailing City,St,Zip:	LOS ANGELES, CA 900124123
	Con Country	N at us a stard

Database(s)

EDR ID Number EPA ID Number

### 1000229433

200 N MAIN ST STE 1000 LOS ANGELES, CA 900124123 Not reported CAD099452708 Not reported Waste oil and mixed oil		
LOS ANGELES, CA 900124123 Not reported CAD099452708 Not reported Waste oil and mixed oil		
Not reported CAD099452708 Not reported Waste oil and mixed oil		
CAD099452708 Not reported Waste oil and mixed oil		
Not reported Waste oil and mixed oil		
Waste oil and mixed oil		
<b>B</b> .		
Recycler		
2.0850		
Not reported		
Not reported		
Los Angeles		
RE STATION #2		
OS ANGELES. CA 90033		

### Site 3 of 5 in cluster D

**FIRE STATION 2** 

D26

D27

WNW

1/8-1/4

0.133 mi. 701 ft.

Relative:	HIST UST:	
Lower	File Number:	Not reported
	URL:	Not reported
Actual:	Region:	STATE
300 ft.	Facility ID:	0000047394
	Facility Type:	Other
	Other Type:	FIRE STATION
	Contact Name:	Not reported
	Telephone:	2134856202
	Owner Name:	CITY OF LOS ANGELES
	Owner Address:	200 N. MAIN ST.
	Owner City,St,Zip:	LOS ANGELES, CA 90012
	Total Tanks:	0001
	Tank Num:	001
	Container Num:	FS2-1
	Year Installed:	Not reported
	Tank Capacity:	00001000
	Tank Used for:	PRODUCT
	Type of Fuel:	UNLEADED
	Container Construction Thickness:	Not reported
	Leak Detection:	Stock Inventor

### HIST UST U001561349 N/A

HIST UST S118410097 N/A

WNW 1/8-1/4 0.133 mi.	2127 E FIRST ST LOS ANGELES, CA 90033	
701 ft.	Site 4 of 5 in cluster D	
Relative:	HIST UST:	
Lower	File Number:	000270D3
	URL:	http://geotracker.waterboards.ca.gov/ustpdfs/pdf/000270D3.pdf
Actual:	Region:	Not reported
300 ft.	Facility ID:	Not reported
	Facility Type:	Not reported

Database(s)

EDR ID Number EPA ID Number

# FIRE STATION 2 (Continued)

Other Type:	Not reported
Contact Name:	Not reported
Telephone:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City,St,Zip:	Not reported
Total Tanks:	Not reported
Tank Num:	Not reported
Container Num:	Not reported
Year Installed:	Not reported

Year Installed:	Not reported
Tank Capacity:	Not reported
Tank Used for:	Not reported
Type of Fuel:	Not reported
Container Construction Thickness:	Not reported
Leak Detection:	Not reported

Click here for Geo Tracker PDF:

D28 WNW 1/8-1/4 0.133 mi.	LOS ANGELES FIRE STATION #2 2127 E 1ST ST 4 LOS ANGELES, CA 90033 mi.	
701 ft.	Site 5 of 5 in cluster D	
Relative: Lower Actual: 300 ft.	SWEEPS UST: Status: Comp Number: Number: Board Of Equalizatior Referral Date: Action Date: Created Date: Owner Tank Id:	Active 2577 4 10: Not reported 10-31-92 10-31-92 02-29-88 Not reported
	SWRCB Tank Id: Tank Status: Capacity: Active Date: Tank Use: STG: Content: Number Of Tanks:	19-050-002577-000001 A 1000 04-20-88 M.V. FUEL P REG UNLEADED 1
	CA FID UST: Facility ID: Regulated By: Regulated ID: Cortese Code: SIC Code: Facility Phone: Mail To: Mailing Address: Mailing Address 2: Mailing City,St,Zip: Contact: Contact Phone: DUNs Number:	19024393 UTNKA 00047394 Not reported Not reported 213000000 Not reported 200 N MAIN ST Not reported LOS ANGELES 900330000 Not reported Not reported Not reported

## S118410097

SWEEPS UST S101585497 CA FID UST N/A

Map ID	
Direction	
Distance	
Elevation	Site

Database(s)

EDR ID Number EPA ID Number

	LOS ANGELES FIRE STATION #2 (Continued)			S101585497	
	NPDES Number: EPA ID: Comments: Status:	Not reported Not reported Not reported Active			
E29 WNW 1/8-1/4 0.151 mi. 795 ft.	MARLENE'S MUFFLER 2239 001ST ST E BOYLE HEIGHTS, CA S Site 1 of 3 in cluster E	SHOP FORMER 90033	SERVICE STATION	LUST	S104916137 N/A
Deletive	LUST				
Actual: 301 ft.	Region: Global Id: Latitude: Longitude: Case Type:		STATE T0603700848 34.0444961 -118.211311 LUST Cleanup Site		
	Status: Status Date: Lead Agency: Case Worker:		Completed - Case Closed 10/27/2015 LOS ANGELES RWQCB (REGION 4) JW		
	Local Agency: RB Case Number: LOC Case Number File Location:	:	LOS ANGELES, CITY OF 900330298 Not reported Regional Board		
	Potential Media Affe Potential Contamin Site History:	ect: ants of Concern:	Soil Gasoline Not reported		
	Click here to acces	s the California G	eoTracker records for this facility:		
	Contact:				
	Global Id: Contact Type: Contact Name: Organization Name Address: City: Email: Phone Number:	Y.	T0603700848 Local Agency Caseworker ELOY LUNA LOS ANGELES, CITY OF 200 North Main Street, Suite 1780 LOS ANGELES eloy.luna@lacity.org Not reported		
	Global Id: Contact Type: Contact Name: Organization Name Address: City: Email: Phone Number:	:	T0603700848 Regional Board Caseworker JIMMIE WOO LOS ANGELES RWQCB (REGION 4) 320 WEST 4TH STREET, SUITE 200 LOS ANGELES jwoo@waterboards.ca.gov 2135766600		
	Status History: Global Id: Status: Status Date:		T0603700848 Completed - Case Closed 10/27/2015		
	Global Id: Status: Status Date:		T0603700848 Open - Case Begin Date 12/01/1991		

Database(s)

EDR ID Number EPA ID Number

MARLENE'S MUFFLER SHOP FORMER	R SERVICE STATION (Continued)
Global Id:	T0603700848
Status:	Open - Eligible for Closure
Status Date:	06/10/2014
Global Id:	T0603700848
Status:	Open - Remediation
Status Date:	06/06/2007
Global Id:	T0603700848
Status:	Open - Remediation
Status Date:	08/14/2007
Global Id:	T0603700848
Status:	Open - Remediation
Status Date:	01/16/2008
Global Id:	T0603700848
Status:	Open - Remediation
Status Date:	10/29/2010
Global Id:	T0603700848
Status:	Open - Site Assessment
Status Date:	12/01/1991
Global Id:	T0603700848
Status:	Open - Site Assessment
Status Date:	07/10/2001
Global Id:	T0603700848
Status:	Open - Site Assessment
Status Date:	01/17/2002
Global Id:	T0603700848
Status:	Open - Site Assessment
Status Date:	07/15/2002
Global Id:	T0603700848
Status:	Open - Site Assessment
Status Date:	04/27/2010
Global Id:	T0603700848
Status:	Open - Verification Monitoring
Status Date:	01/21/1992
Regulatory Activities:	
Global Id:	T0603700848
Action Type:	RESPONSE
Date:	07/15/2005
Action:	Monitoring Report - Quarterly
Global Id:	T0603700848
Action Type:	RESPONSE
Date:	07/15/2011
Action:	Interim Remedial Action Report
Global Id:	T0603700848
Action Type:	RESPONSE

S104916137

Database(s)

EDR ID Number EPA ID Number

S104916137

MARLENE'S MUFFLER SHOP FORMER SERVICE STATION (Continued)			
Date:	07/15/2008		
Action:	Remedial Progress Report		
Global Id:	T0603700848		
Action Type:	RESPONSE		
Date:	01/15/2011		
Action:	Well Installation Report		
Global Id:	T0603700848		
Action Type	ENFORCEMENT		
Date:	09/16/2008		
Action:	Notice to Comply		
Global Id:	T0603700848		
Action Type:	ENFORCEMENT		
Date:	10/27/2015		
Action:	Closure/No Further Action Letter		
Global Id:	T0603700848		
Action Type:	RESPONSE		
Date:	01/15/2011		
Action:	Monitoring Report - Semi-Annually		
	T00007000 (0		
Global Id:	10603700848 DESDONSE		
Action Type:	RE3PON3E		
Dale:	04/15/2007 Remedial Programs Report		
Action.	Kenieulai Progress Report		
Global Id:	T0603700848		
Action Type:	RESPONSE		
Date:	07/15/2007		
Action:	Remedial Progress Report		
Global Id:	T0603700848		
Action Type:	RESPONSE		
Date:	10/15/2007		
Action:	Remedial Progress Report		
Global Id:	T0603700848		
Action Type	RESPONSE		
Date:	01/15/2011		
Action:	Remedial Progress Report		
Global Id:	10603700848		
Action Type:	RESPONSE		
	10/05/2009 Clear Un Fund		
Action.	Clean op Fund - 5-Year Review Summary		
Global Id:	T0603700848		
Action Type:	ENFORCEMENT		
Date:	09/29/2011		
Action:	Staff Letter		
Global Id:	T0603700848		
Action Type:	RESPONSE		
Date:	10/15/2005		
Action:	Monitoring Report - Quarterly		

Database(s)

EDR ID Number EPA ID Number

MARLENE'S MUFFLER SHOP FORMER	SERVICE STATION (Continued)
Global Id:	T0603700848
Action Type:	ENFORCEMENT
Date:	06/05/2014 Notification Brooksure
Action.	Notification - Freciosure
Global Id:	T0603700848
Action Type:	RESPONSE
Date. Action:	Well Destruction Report
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Global Id:	T0603700848
Action Type:	ENFORCEMENT
Action:	Staff Letter
Action.	
Global Id:	T0603700848
Action Type:	Other
Date:	12/03/1991 Leak Discovery
Action.	Leak Discovery
Global Id:	T0603700848
Action Type:	RESPONSE
Date:	04/15/2003
Action:	CAP/RAP - Feasibility Study Report
Global Id:	T0603700848
Action Type:	RESPONSE
Date:	01/15/2011
Action:	CAP/RAP - Final Remediation / Design Plan
Global Id:	T0603700848
Action Type:	RESPONSE
Date:	07/15/2011
Action:	Monitoring Report - Quarterly
Global Id:	T0603700848
Action Type:	RESPONSE
Date:	01/15/2012
Action:	Monitoring Report - Semi-Annually
Global Id:	T0603700848
Action Type:	RESPONSE
Date:	10/28/2011
Action:	Soil and Water Investigation Workplan
Global Id:	T0603700848
Action Type:	RESPONSE
Date:	07/15/2002
Action:	Soil and Water Investigation Workplan
Global Id:	T0603700848
Action Type:	RESPONSE
Date:	04/15/2003
Action:	Soil and Water Investigation Report
Global Id:	T0603700848
Action Type:	RESPONSE

### S104916137

Database(s)

EDR ID Number EPA ID Number

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Date:04/15/2003 Monitoring Report - QuarterlyGlobal Id:T0603700848 RESPONSE Date:Action Type:RESPONSE Date:Date:01/15/2012 Action:Action:Other Report / DocumentGlobal Id:T0603700848 Action Type:Action:Staff LetterGlobal Id:T0603700848 Action:Action:Staff LetterGlobal Id:T0603700848 Action:Action:Staff LetterGlobal Id:T0603700848 Action:Action:Leak ReportedGlobal Id:T0603700848 Action:Action:RESPONSE Date:OtherDate:Off/12/2012 Action:RESPONSE Date:Date:07/12/2012 Action:Action:Remedial Progress ReportGlobal Id:T0603700848 Action:Action:Nonitoring Report - Semi-AnnuallyDate:01/17/2002 Action:Action:Staff LetterGlobal Id:T0603700848 Action:Action:Staff LetterGlobal Id:T0603700848 Action:Action:Staff LetterGlobal Id:T0603700848 Action:Action:Staff LetterGlobal Id:T0603700848 Action:Action:Staff LetterGlobal Id:T0603700848 Action:Action:Staff LetterGlobal Id:T0603700848 Action:Action:Staff LetterGlobal Id:T0603700848 Action:Action:RESPONSE Date	MARLENE'S MUFFLER SHOP FORMER SERVICE STATION (Continued)		
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Action Type:RESPONSEDate:01/15/2013	Global Id:	T0603700848	
Date: 01/15/2013	Action Type:	RESPONSE	
	Date:	01/15/2013	
Action: Monitoring Report - Semi-Annually	Action:	Monitoring Report - Semi-Annually	

Database(s)

EDR ID Number EPA ID Number

MARLENE'S MUFFLER SHOP FORMER	SERVICE STATION (Continued)
Global Id:	T0603700848
Action Type:	RESPONSE
Date:	07/15/2013
Action:	Remedial Progress Report
Global Id:	T0603700848
Action Type:	RESPONSE
Date:	07/15/2013
Action:	Monitoring Report - Semi-Annually
Global Id:	T0603700848
Action Type:	ENFORCEMENT
Date:	12/01/2011
Action:	Staff Letter
Global Id:	T0603700848
Action Type:	RESPONSE
Date:	01/15/2012
Action:	Soil and Water Investigation Report
Global Id:	T0603700848
Action Type	RESPONSE
Date:	01/15/2014
Action:	Soil and Water Investigation Report
Global Id:	T0603700848
Action Type:	RESPONSE
Date:	01/15/2014
Action:	Monitoring Report - Semi-Annually
Global Id:	T0603700848
Action Type:	ENFORCEMENT
Date:	01/27/2003
Action:	Staff Letter
Global Id:	T0603700848
Action Type:	ENFORCEMENT
Date:	04/10/2008
Action:	Staff Letter
Global Id:	T0603700848
Action Type:	RESPONSE
Date:	07/15/2008
Action:	Soil and Water Investigation Workplan
Global Id:	T0603700848
Action Type:	RESPONSE
Date:	04/15/2008
Action:	Monitoring Report - Quarterly
Global Id:	T0603700848
Action Type:	RESPONSE
Date:	04/15/2005
Action:	Monitoring Report - Quarterly
Global Id:	T0603700848
Action Type:	RESPONSE

#### S104916137

Database(s)

EDR ID Number EPA ID Number

# MARLENE'S MUFFLER SHOP FORMER SERVICE STATION (Continued)

01/15/2006

Date:
Action.

Action:Monitoring Report - QuarterlyGlobal Id:T0603700848Action Type:REMEDIATIONDate:02/01/2007Action:Soil Vapor Extraction (SVE)

LUST REG 4:		
Region:	4	
Regional Board:	04	
County:	Los Angeles	
Facility Id:	900330298	
Status:	Pollution Characteriza	tion
Substance:	Gasoline	
Substance Quantity:	Not reported	
Local Case No:	Not reported	
Case Type:	Soil	
Abatement Method Used at	the Site:	Not reported
Global ID:	T0603700848	
W Global ID:	Not reported	
Staff:	JW	
Local Agency:	19050	
Cross Street:	BREED ST.	
Enforcement Type:	SEL	
Date Leak Discovered:	12/3/1991	
Date Leak First Reported:		1/21/1992
Date Leak Record Entered:	4/14/1992	
Date Confirmation Began:	Not reported	
Date Leak Stopped:	Not reported	
Date Case Last Changed or	n Database:	7/15/2002
Date the Case was Closed:		Not reported
How Leak Discovered:	Tank Closure	
How Leak Stopped:	Not reported	
Cause of Leak:	Overfill	
Leak Source:	Tank	
Operator:	Not reported	
Water System:	Not reported	
Well Name:	Not reported	
Approx. Dist To Production	Well (ft):	9378.529954294025315108920322
Source of Cleanup Funding	:	Tank
Preliminary Site Assessmer	nt Workplan Submitted:	12/1/1991
Preliminary Site Assessmer	nt Began:	7/10/2001
Pollution Characterization B	7/15/2002	
Remediation Plan Submitted:		Not reported
Remedial Action Underway:		Not reported
Post Remedial Action Monitoring Began:		1/21/1992
Enforcement Action Date:		Not reported
Historical Max MTBE Date:		Not reported
Hist Max MTBE Conc in Gro	Not reported	
Hist Max MTBE Conc in So	il:	Not reported
Significant Interim Remedia	I Action Taken:	Not reported
GW Qualifier:	Not reported	-
Soil Qualifier:	Not reported	
Organization:	Not reported	
Owner Contact:	Not reported	

# S104916137

Map ID Direction		MAP FINDINGS		EDR ID Number
Elevation	Site		Database(s)	EPA ID Number
	MARLENE'S MUFFLER SHO	P FORMER SERVICE STATION (Continued)		S104916137
	Responsible Party: RP Address: Program: Lat/Long: Local Agency Staff: Beneficial Use: Priority: Cleanup Fund Id: Suspended: Assigned Name: Summary:	MR. MARIO DE LA TORRE 305 N. SOTO ST., SUITE D LUST 34.0444961 / -1 PEJ Not reported Not reported Not reported Not reported Not reported Not reported Not reported		
30 WSW 1/8-1/4 0.153 mi. 807 ft.	LOS ANGELES USD BREED 2226 E THIRD ST LOS ANGELES, CA 90033	ELEM SCHOOL	RCRA-SQG FINDS ECHO	1000102109 CAD982021628
Relative: Higher	RCRA-SQG: Date form received by ag	gency:08/07/1987		
Actual: 302 ft.	Facility name: Facility address:	LOS ANGELES USD BREED ELEM SCHOOL 2226 E THIRD ST LOS ANGELES, CA 90033		
	EPA ID: Mailing address:	CAD982021628		
	Mailing address:	LOS ANGELES, CA 90015		
	Contact:	ENVIRONMENTAL MANAGER		
	Contact address:	2226 E THIRD ST LOS ANGELES, CA 90033		
	Contact country:	US		
	Contact telephone:	(213) 742-7371		
	Contact email:	Not reported		
	EPA Region:	09 Small Small Quantity Concretor		
	Description:	Handler: generates more than 100 and less than 10	)00 kg of bazardous	
	Description.	waste during any calendar month and accumulates hazardous waste at any time; or generates 100 kg waste during any calendar month, and accumulates hazardous waste at any time	less than 6000 kg of or less of hazardous s more than 1000 kg of	
	Owner/Operator Summary:			
	Owner/operator name:	LOS ANGELES UNIFIED SCHOOL DISTRICT		
	Owner/operator address	: NOT REQUIRED NOT REQUIRED, ME 99999		
	Owner/operator country:	Not reported		
	Owner/operator telephor	1e: (415) 555-1212 Municipal		
	Owner/Operator Type	Owner		
	Owner/Op start date:	Not reported		
	Owner/Op end date:	Not reported		
	Owner/operator name: Owner/operator address	NOT REQUIRED : NOT REQUIRED NOT REQUIRED, ME 99999		
	Owner/operator telephor	ne: (415) 555-1212		
	Legal status:	Municipal		

-

Database(s)

EDR ID Number EPA ID Number

#### LOS ANGELES USD BREED ELEM SCHOOL (Continued)

Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

#### Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

#### Violation Status:

No violations found

#### FINDS:

Registry ID:

## 110002778735

Environmental Interest/Information System

California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

<u>Click this hyperlink</u> while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO: Envid: Registry ID: DFR URL:

1000102109 110002778735 http://echo.epa.gov/detailed-facility-report?fid=110002778735

### 1000102109

Database(s)

EDR ID Number EPA ID Number

31 NNE 1/8-1/4 0.182 mi. 959 ft.	LA E/N EAST CHILD CARE CENT 233 N BREED LOS ANGELES, CA 90033	ER	RCRA-SQG FINDS ECHO	1000200021 CAD981987381
Relative: Higher Actual: 332 ft.	RCRA-SQG: Date form received by agency Facility name: Facility address: EPA ID: Mailing address:	7:08/01/1990 LA E/N EAST CHILD CARE CENTER 233 N BREED LOS ANGELES, CA 90033 CAD981987381 200 N MAIN RM EIGHTH HUNDREDCH		
	Contact: Contact address: Contact country: Contact telephone: Contact email: EPA Region: Classification: Description:	EUS ANGELES, CA 90012 ENVIRONMENTAL MANAGER 233 N BREED LOS ANGELES, CA 90033 US (213) 485-7527 Not reported 09 Small Small Quantity Generator Handler: generates more than 100 and less than 1000 kg of waste during any calendar month and accumulates less tha	f hazardous n 6000 kg of	
	Owner/Operator Summary: Owner/operator name: Owner/operator address: Owner/operator country: Owner/operator telephone: Legal status: Owner/Operator Type: Owner/Op start date: Owner/Op end date:	waste during any calendar month, and accumulates more th hazardous waste at any time CITY OF LOS ANGELES NOT REQUIRED NOT REQUIRED, ME 99999 Not reported (415) 555-1212 Municipal Owner Not reported Not reported Not reported	han 1000 kg of	
	Owner/operator name: Owner/operator address: Owner/operator country: Owner/operator telephone: Legal status: Owner/Operator Type: Owner/Op start date: Owner/Op end date: Handler Activities Summary:	NOT REQUIRED NOT REQUIRED NOT REQUIRED, ME 99999 Not reported (415) 555-1212 Municipal Operator Not reported Not reported		
	U.S. importer of hazardous wa Mixed waste (haz. and radioa Recycler of hazardous waste: Transporter of hazardous was Treater, storer or disposer of I Underground injection activity On-site burner exemption: Furnace exemption:	aste: No ctive): No No ste: No HW: No : No No No		

Database(s)

EDR ID Number **EPA ID Number** 

1000200021

Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status:

FINDS:

Registry ID:

110002766588

No violations found

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO: Envid: Registry ID:

DFR URL:

1000200021 110002766588 http://echo.epa.gov/detailed-facility-report?fid=110002766588

E32 NW 1/8-1/4 0.185 mi. 979 ft.	LAPD - HOLLENBECK GARAGE 2111 E 1ST ST LOS ANGELES, CA 90033 Site 2 of 3 in cluster E	
Relative: Higher Actual: 306 ft.	LUST: Region: Global Id: Latitude: Longitude: Case Type: Status: Status Date: Lead Agency: Case Worker: Local Agency: RB Case Number: LOC Case Number: File Location: Potential Media Affect: Potential Contaminants of Concern: Site History:	STATE T0603737703 34.044707 -118.213305 LUST Cleanup Site Completed - Case Closed 01/24/2012 LOS ANGELES, CITY OF EL LOS ANGELES, CITY OF Not reported Not reported Not reported Soil Gasoline Not reported
	•	•

Click here to access the California GeoTracker records for this facility:

Contact:

U001561355 LUST UST N/A SWEEPS UST HIST UST

Database(s)

EDR ID Number EPA ID Number

# LAPD - HOLLENBECK GARAGE (Continued)

U001561355

APD - HOLLENBECK GARAGE (Cont	inued)
Global Id:	T0603737703
Contact Type:	Local Agency Caseworker
Contact Name:	FLOY LUNA
Organization Name:	
Address:	200 North Main Street, Suite 1780
City:	
City. Empile	clos ANGELES
Ellidii. Dhana Numhari	eloy.luna@lacity.org
Phone Number:	Not reported
Global Id:	T0603737703
Contact Type:	Regional Board Caseworker
Contact Name:	YUE RONG
Organization Name:	LOS ANGELES RWQCB (REGION 4)
Address:	320 W. 4TH ST., SUITE 200
City:	Los Angeles
Email:	vrong@waterboards.ca.gov
Phone Number	Not reported
Those Number.	Notreponed
Status Histon/	
Global Id:	T0603737703
Status:	Completed - Case Closed
Status Data:	
Status Date.	01/24/2012
Global Id:	T0603737703
Status:	Open - Case Begin Date
Status Date:	05/02/1990
Global Id:	T0603737703
Status:	Open - Site Assessment
Status Date:	03/29/1993
Regulatory Activities:	
Global Id:	T0603737703
Action Type:	ENFORCEMENT
Date:	01/24/2012
Action:	Closure/No Further Action Letter - #1
Global Id:	T0603737703
Action Type:	Other
Date:	05/02/1990
Action:	Leek Discovery
Action.	Leak Discovery
Global Id:	T0603737703
Action Type:	ENFORCEMENT
Date:	11/10/2011
Action:	Staff Letter
	T0602727702
	10003737703
Action Type:	
	03/30/1993
Action:	Leak Reported
LIGT	

UST: Facility ID: Permitting Agency:

CAD981656218 Los Angeles City Fire Department

Database(s)

EDR ID Number EPA ID Number

# LAPD - HOLLENBECK GARAGE (Continued)

Latitude:	34.04484
Longitude:	-118.21351
Facility ID:	25061
Permitting Agency:	LOS ANGELES, CITY OF
Latitude:	34.0459132
Longitude:	-118.2115592

SWEEPS UST:	
Status:	Not reported
Comp Number:	2614
Number:	Not reported
Board Of Equalization:	44-012042
Referral Date:	Not reported
Action Date:	Not reported
Created Date:	Not reported
Owner Tank Id:	Not reported
SWRCB Tank Id:	19-050-002614-000002
Tank Status:	Not reported
Capacity:	550
Active Date:	Not reported
Tank Use:	M.V. FUEL
STG:	PRODUCT
Content:	DIESEL
Number Of Tanks:	1
	-
Status:	Active
Comp Number:	2614
Number:	4
Board Of Equalization:	44-012042
Referral Date:	06-16-93
Action Date:	04-19-94
Created Date:	02-29-88
Owner Tank Id:	Not reported
SWRCB Tank Id:	19-050-002614-000001
Tank Status:	A
Capacity:	6000
Active Date:	04-20-88
Tank Use:	M.V. FUEL
STG:	Р
Content:	REG UNLEADED
Number Of Tanks:	3
Chathian	A ative
Status:	Active
Comp Number:	2614
Number:	4
Board Of Equalization:	44-012042
Referral Date:	06-16-93
Action Date:	04-19-94
Created Date:	UZ-ZY-88
Owner Lank Id:	
SWRCB Lank Id:	19-050-002614-000003
Tank Status:	A
Capacity:	500

04-20-88

OIL

W

Active Date:

Tank Use:

STG:

# U001561355

Database(s)

EDR ID Number EPA ID Number

# LAPD - HOLLENBECK GARAGE (Continued)

	Content: Number Of Tanks:	WASTE OIL Not reported	- d
	Number Of Tanks: Status: Comp Number: Number: Board Of Equalization: Referral Date: Action Date: Created Date: Owner Tank Id: SWRCB Tank Id: Tank Status:	Not reported Active 2614 4 44-012042 06-16-93 04-19-94 02-29-88 Not reported 19-050-002 A	d 614-000004
	Capacity:	6000	
	Active Date: Tank Use:	CHEMICAL	
	STG:	Р	
	Content: Number Of Tanks:	UNKNOWN Not reported	d
н	IST UST: File Number: URL:		00027110 http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00027110.pdf
	Region:		STATE
	Facility ID: Eacility Type:		00000047439 Other
	Other Type:		LAPD
	Contact Name:		LOUIS ARMSTRONG
	Telephone:		2134852945
	Owner Name:		CITY OF LOS ANGELES
	Owner Address:		200 N. SPRING ST.
	Total Tanks:		0004
	Tank Num:		001
	Container Num:		1
	Year Installed:		Not reported
	Tank Used for		PRODUCT
	Type of Fuel:		UNLEADED
	Container Construction	Thickness:	1/4
	Leak Detection:		Stock Inventor, None
	Tank Num:		002
	Container Num:		(2)
	Year Installed:		Not reported
	Tank Capacity.		
	Type of Fuel:		DIESEL
	Container Construction	Thickness:	1/4
	Leak Detection:		Stock Inventor, None
	Tank Num:		003
	Container Num:		3 Not reported
	rear Installed: Tank Canacity:		
	Tank Used for:		WASTE

Database(s)

EDR ID Number EPA ID Number

U001561355

# LAPD - HOLLENBECK GARAGE (Continued)

WASTE OIL 1/4 Stock Inventor
004
4
Not reported
0000000
WASTE
Not reported
6
None

Click here for Geo Tracker PDF:

E33 NW 1/8-1/4	HOLLENBECK POLICE S 2111 E 1ST ST LOS ANGELES, CA 9003	TATION 3	CA FID UST	S101617364 N/A
0.185 ml. 979 ft.	Site 3 of 3 in cluster E			
Relative: Higher Actual: 306 ft.	CA FID UST: Facility ID: Regulated By: Regulated ID: Cortese Code: SIC Code: Facility Phone: Mailing Address: Mailing Address: Mailing Address 2: Mailing Address 2: Mailing City,St,Zip: Contact: Contact Phone: DUNs Number: NPDES Number: EPA ID: Comments: Status:	19023507 UTNKA 00047439 Not reported Not reported 2134855846 Not reported 200 N MAIN STREET-ROOM Not reported LOS ANGELES 900330000 Not reported Not reported Not reported Not reported Not reported Not reported Not reported Not reported Not reported Active		
F34 SW 1/8-1/4 0.186 mi. 980 ft.	CHEVRON STATION 9060 2333 E 4TH ST LOS ANGELES, CA 9003 Site 1 of 6 in cluster F	58 3	SWEEPS UST CA FID UST	S101583841 N/A
Relative: Higher Actual:	SWEEPS UST: Status: Comp Number: Number:	Not reported 3470 Not reported		
313 ft.	Board Of Equalization Referral Date: Action Date: Created Date: Owner Tank Id: SWRCB Tank Id:	n: 44-013017 Not reported Not reported Not reported Not reported 19-050-003470-000001		

Database(s)

EDR ID Number EPA ID Number

# CHEVRON STATION 90668 (Continued)

Tank Status: Capacity: Active Date: Tank Use: STG: Content: Number Of Tanks:	Not reported 10000 Not reported CHEMICAL PRODUCT UNKNOWN 4
Status: Comp Number: Number: Board Of Equalization: Referral Date: Action Date: Created Date: Owner Tank Id: SWRCB Tank Id: Tank Status: Capacity: Active Date: Tank Use: STG: Content: Number Of Tanks:	Not reported 3470 Not reported 44-013017 Not reported Not reported Not reported 19-050-003470-000002 Not reported 10000 Not reported CHEMICAL PRODUCT UNKNOWN Not reported
Status: Comp Number: Number: Board Of Equalization: Referral Date: Action Date: Created Date: Owner Tank Id: SWRCB Tank Id: Tank Status: Capacity: Active Date: Tank Use: STG: Content: Number Of Tanks:	Not reported 3470 Not reported 44-013017 Not reported Not reported Not reported 19-050-003470-000003 Not reported 5000 Not reported CHEMICAL PRODUCT UNKNOWN Not reported
Status: Comp Number: Number: Board Of Equalization: Referral Date: Action Date: Created Date: Owner Tank Id: SWRCB Tank Id: Tank Status: Capacity: Active Date: Tank Use: STG: Content:	Not reported 3470 Not reported 44-013017 Not reported Not reported Not reported 19-050-003470-000004 Not reported 1000 Not reported CHEMICAL PRODUCT UNKNOWN

### S101583841

F35

90668

# MAP FINDINGS

Database(s)

EDR ID Number EPA ID Number

### CHEVRON STATION 90668 (Continued)

Number Of Tanks:	Not reported
CA FID UST:	
Facility ID:	19006724
Regulated By:	UTNKI
Regulated ID:	00061874
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	2136947000
Mail To:	Not reported
Mailing Address:	575 MARKET ST
Mailing Address 2:	Not reported
Mailing City,St,Zip:	LOS ANGELES 900330000
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Inactive

S101583841

HIST UST U001561336 N/A

SW 1/8-1/4 0.186 mi.	2333 E 4TH ST LOS ANGELES, CA 90033	
980 ft.	Site 2 of 6 in cluster F	
Relative: Higher	HIST UST: File Number:	00026BFC
Actual: 313 ft.	URL: Region: Facility ID: Facility Type: Other Type: Contact Name: Telephone: Owner Name: Owner Address: Owner City,St,Zip: Total Tanks:	http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00026BFC.pdf STATE 00000061874 Gas Station Not reported ELMIR, GHASSAN 2132678760 CHEVRON U.S.A. INC. 575 MARKET SAN FRANCISCO, CA 94105 0004
	Tank Num: Container Num: Year Installed: Tank Capacity: Tank Used for: Type of Fuel: Container Construction Thickness: Leak Detection: Tank Num: Container Num: Year Installed: Tank Capacity: Tank Used for: Type of Fuel:	001 1 1969 00010000 PRODUCT Not reported 000250 Stock Inventor 002 2 1969 00010000 PRODUCT Not reported
	Container Construction Thickness:	0000250

Database(s)

EDR ID Number EPA ID Number

# 90668 (Continued)

Leak Detection:	Stock Inventor
Tank Num:	003
Container Num:	3
Year Installed:	1969
Tank Capacity:	00005000
Tank Used for:	PRODUCT
Type of Fuel:	Not reported
Container Construction Thickness:	0000250
Leak Detection:	Stock Inventor
Tank Num:	004
Container Num:	4
Year Installed:	1969
Tank Capacity:	00001000
Tank Used for:	WASTE
Type of Fuel:	Not reported
Container Construction Thickness:	0000130
Leak Detection:	Stock Inventor

Click here for Geo Tracker PDF:

F36 SSW 1/8-1/4 0.192 mi.	WINALL #1 401 SOTO ST. S. LOS ANGELES, CA 90033		
1013 ft.	Site 3 of 6 in cluster F		
Relative: Higher	LUST: Region:	STATE	
5	Global Id:	T0603739097	
Actual:	Latitude:	34.040368	
315 ft.	Longitude:	-118.212153	
	Case Type:	LUST Cleanup Site	
	Status:	Open - Remediation	
	Status Date:	05/15/2013	
	Lead Agency:	LOS ANGELES RWQCB (REGION 4)	
	Case Worker:	MT	
	Local Agency:	LOS ANGELES, CITY OF	
	RB Case Number:	900330416	
	LOC Case Number:	11763	
	File Location:	Regional Board	
	Potential Media Affect:	Other Groundwater (uses other than drinking water), Soil	
	Potential Contaminants of Concern:	Gasoline	
	Site History:	Not reported	
	Click here to access the California G	eoTracker records for this facility:	
	Contact:		
	Global Id:	T0603739097	
	Contact Type:	Regional Board Caseworker	
	Contact Name:	MARYAM TAIDY	
	Organization Name:	LOS ANGELES RWQCB (REGION 4)	
	Address:	320 W. 4TH ST., SUITE 200	
	City:	LOS ANGELES	
	Email:	mtaidy@waterboards.ca.gov	
	Phone Number:	2135766741	

LUST S109117772 N/A

U001561336

#### Map ID Direction Distance Elevation Site

#### MAP FINDINGS

Database(s)

EDR ID Number EPA ID Number

#### S109117772

WINALL #1 (Continued)

Global Id: Contact Type: Contact Name: Organization Name: Address: City: Email: Phone Number:

Status History: Global Id: Status: Status Date:

> Global Id: Status: Status Date:

Global Id: Status: Status Date:

Global Id: Status: Status Date:

Global Id: Status: Status Date:

Regulatory Activities: Global Id: Action Type: Date: Action:

> Global Id: Action Type: Date: Action:

> Global Id: Action Type: Date: Action:

> Global Id: Action Type: Date: Action:

> Global Id: Action Type: Date: Action:

T0603739097 Local Agency Caseworker PATRICK KILLIAN LOS ANGELES, CITY OF 221 N FIGUEROA ST STE 1500 LOS ANGELES Not reported 2134826527

T0603739097 Open - Case Begin Date 07/21/1998

T0603739097 Open - Referred 12/09/2008

T0603739097 Open - Remediation 05/15/2013

T0603739097 Open - Site Assessment 07/12/2007

T0603739097 Open - Site Assessment 02/19/2009

T0603739097 RESPONSE 07/15/2011 Monitoring Report - Semi-Annually

T0603739097 RESPONSE 06/01/2010 Interim Remedial Action Report

T0603739097 RESPONSE 01/15/2014 Monitoring Report - Semi-Annually

T0603739097 ENFORCEMENT 05/15/2013 Staff Letter

T0603739097 RESPONSE 07/15/2009 Monitoring Report - Quarterly

Database(s)

EDR ID Number **EPA ID Number** 

#### WINALL #1 (Continued)

Global Id:

Date:

Date:

Date: Action:

Date:

Date:

Date:

Date:

Date:

Date:

Date:

Date:

Action:

Global Id:

Action:

Global Id:

Action: Global Id:

Action:

Global Id:

Action:

Global Id:

Action:

Global Id:

Action:

Global Id:

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Global Id:

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Global Id:

Global Id:

Action:

Global Id:

T0603739097 RESPONSE Action Type: 07/15/2010 Monitoring Report - Semi-Annually T0603739097 RESPONSE Action Type: 01/15/2009 Monitoring Report - Quarterly T0603739097 RESPONSE Action Type: 12/10/2009 Interim Remedial Action Report T0603739097 RESPONSE Action Type: 04/15/2009 Monitoring Report - Quarterly T0603739097 RESPONSE Action Type: 10/15/2015 Monitoring Report - Semi-Annually T0603739097 Action Type: Other 07/21/1998 Leak Discovery T0603739097 Action Type: ENFORCEMENT 08/03/2012 Staff Letter T0603739097 Action Type: RESPONSE 01/15/2011 Monitoring Report - Semi-Annually T0603739097 Action Type: RESPONSE 01/14/2009 Interim Remedial Action Report T0603739097 Action Type: RESPONSE 01/15/2016 Monitoring Report - Semi-Annually T0603739097 Action Type: RESPONSE 01/15/2012 Monitoring Report - Semi-Annually T0603739097 Action Type: RESPONSE

#### S109117772

Database(s)

EDR ID Number **EPA ID Number** 

S109117772

#### WINALL #1 (Continued)

Date:

Date:

Date:

Date:

Date:

Date:

Date: Action:

Date:

Date:

Date:

Date:

Date: Action:

Action:

Action:

Action:

Action:

Action:

Action:

Action:

Action:

Action:

Action:

08/31/2012 Corrective Action Plan / Remedial Action Plan Global Id: T0603739097 Action Type: RESPONSE 07/15/2012 Monitoring Report - Semi-Annually Global Id: T0603739097 Action Type: ENFORCEMENT 02/19/2009 Staff Letter Global Id: T0603739097 Action Type: ENFORCEMENT 02/23/2009 Verbal Enforcement Global Id: T0603739097 Action Type: RESPONSE 01/24/2011 Interim Remedial Action Report Global Id: T0603739097 Action Type: RESPONSE 01/23/2013 Interim Remedial Action Report T0603739097 Global Id: RESPONSE Action Type: 01/23/2013 Site Assessment Report Global Id: T0603739097 RESPONSE Action Type: 01/15/2013 Monitoring Report - Semi-Annually T0603739097 Global Id: Action Type: RESPONSE 07/15/2013 CAP/RAP - Other Report Global Id: T0603739097 Action Type: RESPONSE 03/22/2013 CAP/RAP - Final Remediation / Design Plan - Regulator Responded Global Id: T0603739097 Action Type: Other 08/30/1998 Leak Reported Global Id: T0603739097 Action Type: RESPONSE 07/15/2013 Monitoring Report - Semi-Annually

Database(s)

EDR ID Number EPA ID Number

### S109117772

# WINALL #1 (Continued)

Global Id:	T0603739097
Action Type:	RESPONSE
Date:	09/09/2013
Action:	Well Installation Report
Global Id:	T0603739097
Action Type:	RESPONSE
Date:	01/15/2010
Action:	Monitoring Report - Semi-Annually
Global Id:	T0603739097
Action Type:	RESPONSE
Date:	07/15/2014
Action:	Monitoring Report - Semi-Annually
Global Id:	T0603739097
Action Type:	RESPONSE
Date:	01/15/2015
Action:	Monitoring Report - Semi-Annually
Global Id:	T0603739097
Action Type:	REMEDIATION
Date:	07/13/2008
Action:	Free Product Removal

F37 SW 1/8-1/4 0.192 mi.	EAST L A PHOTO AND STUDIO 2323 E 4TH ST LOS ANGELES, CA 90033	RCRA-S FIN EC HAZI	SQG NDS CHO NET	1000820264 CAD983662982
1013 ft.	Site 4 of 6 in cluster F			
Relative: Higher Actual: 312 ft.	RCRA-SQG: Date form received by agence Facility name: Facility address: EPA ID: Mailing address: Contact: Contact address: Contact country: Contact telephone: Contact telephone: Contact email: EPA Region: Classification: Description:	y: 03/30/1993 EAST L A PHOTO AND STUDIO 2323 E 4TH ST LOS ANGELES, CA 90033 CAD983662982 E 4TH ST LOS ANGELES, CA 90033 ESTHER KIM 2323 E 4TH ST LOS ANGELES, CA 90033 US (213) 264-5940 Not reported 09 Small Small Quantity Generator Handler: generates more than 100 and less than 1000 kg of hazardo waste during any calendar month and accumulates less than 6000 k hazardous waste at any time; or generates 100 kg or less of hazardo	us g of us	
		hazardous waste at any time	kg oi	
	Owner/Operator Summary:			
	Owner/operator name: Owner/operator address:	HYANG SOON KIM 2323 E 4TH ST		
Database(s)

EDR ID Number EPA ID Number

#### EAST L A PHOTO AND STUDIO (Continued)

	LOS ANGELES, CA 90033
Owner/operator country:	Not reported
Owner/operator telephone:	(213) 264-5940
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:	
U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status:

No violations found

#### FINDS:

Registry ID:

110002895341

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid: Registry ID: DFR URL: 1000820264 110002895341 http://echo.epa.gov/detailed-facility-report?fid=110002895341

#### HAZNET:

envid:	1000820264
Year:	1998
GEPAID:	CAD983662982
Contact:	HYUN MYUNG OH
Telephone:	000000000
Mailing Name:	Not reported
Mailing Address:	2323 E 4TH ST

Database(s)

EDR ID Number EPA ID Number

## EAST L A PHOTO AND STUDIO (Continued)

Mailing City,St,Zip: Gen County: TSD EPA ID: TSD County: Waste Category: Disposal Method: Tons: Cat Decode: Method Decode: Facility County:	LOS ANGELES, CA 900330000 Not reported CAD108040858 Not reported Photochemicals/photoprocessing waste Recycler .7338 Not reported Not reported Los Angeles
envid: Year: GEPAID: Contact: Telephone: Mailing Name: Mailing Address: Mailing City,St,Zip: Gen County: TSD EPA ID: TSD County: Waste Category: Disposal Method: Tons: Cat Decode: Method Decode: Facility County:	1000820264 1997 CAD983662982 HYUN MYUNG OH 000000000 Not reported 2323 E 4TH ST LOS ANGELES, CA 900330000 Not reported CAD108040858 Not reported Photochemicals/photoprocessing waste Recycler .5418 Not reported Not reported Not reported Los Angeles
envid: Year: GEPAID: Contact: Telephone: Mailing Name: Mailing Address: Mailing Address: Mailing City,St,Zip: Gen County: TSD EPA ID: TSD County: Waste Category: Disposal Method: Tons: Cat Decode: Method Decode: Facility County:	1000820264 1996 CAD983662982 HYUN MYUNG OH 00000000 Not reported 2323 E 4TH ST LOS ANGELES, CA 900330000 Not reported CAD108040858 Not reported Photochemicals/photoprocessing waste Recycler .2500 Not reported Not reported Not reported Not reported Los Angeles

F38 SSW 1/8-1/4 0.214 mi. 1129 ft.	WINALL OIL CO 401 S SOTO ST LOS ANGELES, CA 90033 Site 5 of 6 in cluster F	
Relative: Higher Actual:	UST: Facility ID: Permitting Agency: Latitude:	Not reported Los Angeles City Fire Department 34.0404
315 ft.	Longitude:	-118.21217

#### 1000820264

UST U003943019 N/A

Database(s)

EDR ID Number EPA ID Number

	WINALL OIL CO (Continued)			U003	
	Facility ID: Permitting Agency: Latitude: Longitude:	24378 LOS ANGELES, CIT 34.041746 -118.210821	YOF		
F39 SSW 1/8-1/4 0.214 mi.	WINALL OIL COMPANY 401 S SOTO ST LOS ANGELES, CA 900	33		SWEEPS UST CA FID UST	S101584254 N/A
1129 ft.	Site 6 of 6 in cluster F				
Relative: Higher Actual: 315 ft.	SWEEPS UST: Status: Comp Number: Number: Board Of Equalizatio Referral Date: Action Date: Created Date: Owner Tank Id: SWRCB Tank Id: Tank Status: Capacity: Active Date: Tank Use: STG: Content: Number Of Tanks:	Active 4707 1 on: Not reported 02-25-93 02-25-93 02-29-88 Not reported Not reported			
	CA FID UST: Facility ID: Regulated By: Regulated ID: Cortese Code: SIC Code: Facility Phone: Mail To: Mailing Address: Mailing Address 2: Mailing City,St,Zip: Contact: DUNs Number: NPDES Number: EPA ID: Comments: Status:	19009951 UTNKA Not reported Not reported 213000000 Not reported 401 S SOTO ST Not reported LOS ANGELES 900330000 Not reported Not reported Not reported Not reported Not reported Not reported Not reported Not reported Not reported Active			

Database(s)

EDR ID Number EPA ID Number

G40 SSW 1/8-1/4 0.214 mi. 1129 ft.	CHA SHELL 400 S SOTO ST LOS ANGELES, CA 90033 Site 1 of 2 in cluster G		SWEEPS UST CA FID UST	S101585957 N/A
Relative: Higher	SWEEPS UST: Status:	Active		
Actual: 316 ft.	Number: Board Of Equalization: Referral Date: Action Date: Created Date: Owner Tank Id: SWRCB Tank Id: Tank Status: Capacity: Active Date: Tank Use: STG: Content: Number Of Tanks:	2 Not reported 02-25-93 05-03-94 02-29-88 0000004466 19-050-004466-000001 A 12000 02-19-93 M.V. FUEL P REG UNLEADED 4		
	Status: Comp Number: Number: Board Of Equalization: Referral Date: Action Date: Created Date: Owner Tank Id: SWRCB Tank Id: Tank Status: Capacity: Active Date: Tank Use: STG: Content: Number Of Tanks:	Active 4466 2 Not reported 02-25-93 05-03-94 02-29-88 4466-2 19-050-004466-000002 A 12000 02-19-93 M.V. FUEL P PRM UNLEADED Not reported		
	Status: Comp Number: Number: Board Of Equalization: Referral Date: Action Date: Created Date: Owner Tank Id: SWRCB Tank Id: Tank Status: Capacity: Active Date: Tank Use: STG: Content: Number Of Tanks:	Active 4466 2 Not reported 02-25-93 05-03-94 02-29-88 4466-3 19-050-004466-000003 A 12000 02-19-93 M.V. FUEL P PREMIUM UNLE Not reported		
	Status:	Active		

CHA SHELL (Continued)

Comp Number:

EPA Region:

09

4466

#### MAP FINDINGS

Database(s)

EDR ID Number EPA ID Number

S101585957

	Number:	. 2			
	Board Of Equalization	ion: Not i	reported		
	Referral Date:	02-2	5-93		
	Action Date:	05-0	3-94		
	Created Date:	02-2	9-88		
	Owner Tank Id:	4466			
	SWRCB Tank Id:	19-0	50-004466-000004		
	Tank Status:	A			
	Capacity:	550			
	Active Date:	02-1	9-93		
	Tank Use:	OIL			
	STG:	W			
	Content:	WAS	STE OIL		
	Number Of Tanks:	Not	reported		
	CA FID UST:				
	Facility ID:	190347	84		
	Regulated By:	UTNKA			
	Regulated ID:	Not rep	orted		
	Cortese Code:	Not rep	orted		
	SIC Code:	Not rep	orted		
	Facility Phone:	213261	0356		
	Mail To:	Not rep	orted		
	Mailing Address	400 S S	SOTO ST		
	Mailing Address 2	Not rep	orted		
	Mailing City St Zin:		IGELES 900330000		
	Contact:	Not rep	orted		
	Contact Phone:	Not rep	orted		
	DUNs Number:	Not rep	orted		
		Not rep	arted		
		Not rep	orted		
	EPA ID.	Notrep	oned		
	Comments:	Not rep	onea		
	Status:	Active			
G41	SHELL SERVICE STATION	ION		RCRA-SQG	1000
SSW	400 S SOTO ST			LUST	CAD
1/8-1/4 0.214 mi.	LOS ANGELES, CA 900	033		UST	
1129 ft.	Site 2 of 2 in cluster G				
Relative:	RCRA-SQG:				
Higher	Date form received	by agency	y: 11/13/2001		
U	Facility name:		SHELL SERVICE STATION		
Actual:	Facility address:		400 S SOTO ST		
316 ft.	-		S A P 135484		
			LOS ANGELES, CA 90033		
	EPA ID:		CAD983596032		
	Mailing address:		P O BOX 2648		
	<u> </u>		HOUSTON, TX 772522648		
	Contact		SONDRA BIENVENU		
	Contact address		P 0 B0X 2648		
	contact data obs.		HOUSTON TX 772522648		
	Contact country:				
	Contact telephone		(713) 241-5036		
	Contact email:		Not reported		

EDR ID Number Database(s) EPA ID Number

#### SHELL SERVICE STATION (Continued)

#### Classification: Small Small Quantity Generator Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time Owner/Operator Summary: Owner/operator name: NOT REQUIRED Owner/operator address: NOT REQUIRED NOT REQUIRED, ME 99999 Owner/operator country: Not reported Owner/operator telephone: (415) 555-1212 Legal status: Private Owner/Operator Type: Operator Owner/Op start date: Not reported Owner/Op end date: Not reported EQUILON ENTERPRISES L L C Owner/operator name: Owner/operator address: P O BOX 2648 HOUSTON, TX 77252 Owner/operator country: Not reported Owner/operator telephone: (713) 241-5036 Legal status: Private Owner/Operator Type: Owner Owner/Op start date: Not reported Owner/Op end date: Not reported Handler Activities Summary: U.S. importer of hazardous waste: No Mixed waste (haz. and radioactive): No Recycler of hazardous waste: No Transporter of hazardous waste: No Treater, storer or disposer of HW: No Underground injection activity: No On-site burner exemption: No Furnace exemption: No Used oil fuel burner: No Used oil processor: No User oil refiner: No Used oil fuel marketer to burner: No Used oil Specification marketer: No Used oil transfer facility: No Used oil transporter: No Waste code: D001 Waste name: **IGNITABLE WASTE** D018 Waste code: BENZENE Waste name: Violation Status: No violations found LUST: Region: STATE Global Id: T0603760383 Latitude: 34.040219

Database(s)

EDR ID Number EPA ID Number

#### SHELL SERVICE STATION (Continued)

Longitude:	-118.211558
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	09/12/2012
Lead Agency:	LOS ANGELES RWQCB (REGION 4)
Case Worker:	MT
Local Agency:	LOS ANGELES, CITY OF
RB Case Number:	900330389
LOC Case Number:	Not reported
File Location:	Regional Board
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

#### Contact:

Global Id: Contact Type: Contact Name: Organization Name: Address: City: Email: Phone Number: Global Id: Contact Type: Contact Name: Organization Name: Address: City: Email: Phone Number:

Status History:

Global Id: Status: Status Date:

0603760383 Local Agency Caseworker ELOY LUNA LOS ANGELES, CITY OF 200 North Main Street, Suite 1780 LOS ANGELES eloy.luna@lacity.org Not reported

T0603760383 Regional Board Caseworker MARYAM TAIDY LOS ANGELES RWQCB (REGION 4) 320 W. 4TH ST., SUITE 200 LOS ANGELES mtaidy@waterboards.ca.gov 2135766741

T0603760383 Completed - Case Closed 09/12/2012

T0603760383 Open - Case Begin Date 02/02/2002

T0603760383 Open - Site Assessment 09/18/2002

T0603760383 Open - Site Assessment 11/04/2005

T0603760383 Open - Site Assessment 04/25/2006

Database(s)

EDR ID Number EPA ID Number

#### .... **س** 10 SHELL SERV UCE OT

HELL SERVICE STATION (C	Continued)
Regulatory Activities: Global Id: Action Type: Date: Action:	T0603760383 ENFORCEMENT 07/07/2003 Staff Letter
Global Id:	T0603760383
Action Type:	ENFORCEMENT
Date:	09/12/2012
Action:	Closure/No Further Action Letter
Global Id:	T0603760383
Action Type:	RESPONSE
Date:	10/15/2011
Action:	Monitoring Report - Quarterly
Global Id:	T0603760383
Action Type:	RESPONSE
Date:	10/15/2008
Action:	Monitoring Report - Quarterly
Global Id:	T0603760383
Action Type:	RESPONSE
Date:	01/22/2008
Action:	Interim Remedial Action Plan
Global Id:	T0603760383
Action Type:	RESPONSE
Date:	06/01/2010
Action:	Soil and Water Investigation Workplan
Global Id:	T0603760383
Action Type:	RESPONSE
Date:	01/15/2012
Action:	Monitoring Report - Quarterly
Global Id:	T0603760383
Action Type:	RESPONSE
Date:	07/15/2008
Action:	Monitoring Report - Quarterly
Global Id:	T0603760383
Action Type:	RESPONSE
Date:	10/15/2010
Action:	Monitoring Report - Semi-Annually
Global Id:	T0603760383
Action Type:	RESPONSE
Date:	04/15/2010
Action:	Monitoring Report - Semi-Annually
Global Id:	T0603760383
Action Type:	RESPONSE
Date:	04/25/2006
Action:	Soil and Water Investigation Workplan
Global Id:	T0603760383

Database(s)

EDR ID Number EPA ID Number

#### SHELL S

LL SERVICE STATION (Continued	i)
Action Type:	RESPONSE
Date:	01/15/2006
Action:	Monitoring Report - Quarterly
Global Id:	T0603760383
Action Type:	RESPONSE
Date:	04/15/2008
Action:	Monitoring Report - Quarterly
Global Id:	T0603760383
Action Type:	ENFORCEMENT
Date:	06/15/2009
Action:	Staff Letter
Global Id:	T0603760383
Action Type:	RESPONSE
Date:	07/15/2009
Action:	Monitoring Report - Semi-Annually
Global Id:	T0603760383
Action Type:	RESPONSE
Date:	01/15/2007
Action:	Monitoring Report - Quarterly
Global Id:	T0603760383
Action Type:	RESPONSE
Date:	08/08/2003
Action:	Other Report / Document
Global Id:	T0603760383
Action Type:	RESPONSE
Date:	07/15/2007
Action:	Monitoring Report - Quarterly
Global Id:	T0603760383
Action Type:	RESPONSE
Date:	10/15/2009
Action:	Monitoring Report - Semi-Annually
Global Id:	T0603760383
Action Type:	ENFORCEMENT
Date:	09/12/2012
Action:	Closure/No Further Action Letter
Global Id:	T0603760383
Action Type:	ENFORCEMENT
Date:	09/12/2012
Action:	Staff Letter
Global Id:	T0603760383
Action Type:	RESPONSE
Date:	01/10/2011
Action:	Site Assessment Report
Global Id:	T0603760383
Action Type:	RESPONSE
Date:	11/01/2005

Database(s)

EDR ID Number **EPA ID Number** 

#### SHELL SERVICE STATION (Continued)

Action:	Soil and Water Investigation Report
Global Id:	T0603760383
Action Type:	RESPONSE
Date:	04/15/2009
Action:	Monitoring Report - Quarterly
Global Id:	T0603760383
Action Type:	RESPONSE
Date:	04/15/2012
Action:	Monitoring Report - Quarterly
Global Id:	T0603760383
Action Type:	RESPONSE
Date:	07/15/2006
Action:	Monitoring Report - Quarterly
Global Id:	T0603760383
Action Type:	RESPONSE
Date:	10/28/2009 Soil and Water Investigation Workness
ACUON.	Soli and water investigation workplan
Global Id:	T0603760383
Action Type:	RESPONSE
Date:	04/15/2006
Action:	Monitoring Report - Quarterly
Global Id:	T0603760383
Action Type:	RESPONSE
Date:	10/15/2006
Action:	Monitoring Report - Quarterly
Global Id:	T0603760383
Action Type:	RESPONSE
Date:	10/15/2006
Action:	Soil and Water Investigation Report
Global Id:	T0603760383
Action Type:	RESPONSE
Date:	04/15/2011 Maritarian Danati - Qani Anaralla
Action:	Monitoring Report - Semi-Annually
Global Id:	T0603760383
Action Type:	RESPONSE
Date:	10/15/2007
Action:	Monitoring Report - Quarterly
Global Id:	T0603760383
Action Type:	RESPONSE
Date.	UI/ID/2008 Monitoring Roport Ouerterly
ACIION.	Monitoring Report - Quarterly
Global Id:	T0603760383
Action Type:	RESPONSE
Date:	06/20/2011
Action:	Soli and water investigation Report

Database(s)

EDR ID Number EPA ID Number

## SHELL SERVICE STATION (Continued)

Global Id:	T0603760383
Action Type:	Other
Date:	09/18/2002
Action:	Leak Reported
Global Id:	T0603760383
Action Type:	RESPONSE
Date:	04/15/2007
Action:	Monitoring Report - Quarterly
Global Id:	T0603760383
Action Type:	Other
Date:	02/02/2002
Action:	Leak Discovery
Global Id:	T0603760383
Action Type:	ENFORCEMENT
Date:	06/04/2012
Action:	Notification - Preclosure
Global Id:	T0603760383
Action Type:	RESPONSE
Date:	01/15/2009
Action:	Monitoring Report - Quarterly
Global Id:	T0603760383
Action Type:	RESPONSE
Date:	10/15/2004
Action:	Monitoring Report - Quarterly
Global Id:	T0603760383
Action Type:	REMEDIATION
Date:	02/02/2002
Action:	Excavation
Global Id:	T0603760383
Action Type:	REMEDIATION
Date:	02/02/2002
Action:	Other (Use Description Field)
LUST REG 4: Region: Regional Board: County: Facility Id: Status: Substance: Substance Quantity: Local Case No: Case Type: Abatement Method Used at	4 04 Los Angeles 900330389 Leak being confirmed Gasoline Not reported Not reported Soil the Site: Not reported
Global ID:	T0603760383
W Global ID:	Not reported
Staff:	CEC
Local Agency:	19050
Cross Street:	4TH ST.

Database(s)

EDR ID Number EPA ID Number

Enforcement Type:	SEL	
Date Leak Discovered:	2/2/2002	
Date Leak First Reported:		9/18/2002
Date Leak Record Entered:	Not reported	
Date Confirmation Began:	9/18/2002	
Date Loak Stopped:	Not reported	
Date Leak Stopped.		Not reported
Date the Case was Classed	T Dalabase.	Not reported
Date the Case was Closed:		Not reported
How Leak Discovered:	OM	
How Leak Stopped:	Other Means	
Cause of Leak:	UNK	
Leak Source:	UNK	
Operator:	Not reported	
Water System:	Not reported	
Well Name:	Not reported	
Approx. Dist To Production	Well (ft):	Not reported
Source of Cleanup Funding	:	UNK
Preliminary Site Assessmer	nt Workplan Submitted:	Not reported
Preliminary Site Assessmer	nt Began:	Not reported
Pollution Characterization B	legan.	Not reported
Remediation Plan Submitte	d.	Not reported
Remedial Action Underway:		Not reported
Post Remedial Action Monit	oring Began	Not reported
Enforcement Action Date:	oning began.	Not reported
Linicement Action Date.		Not reported
		INTERNE FOR THE TARGET
Historical Max MIBE Date:	aundurator.	Not reported
Historical Max MTBE Date: Hist Max MTBE Conc in Gro	oundwater:	Not reported
Historical Max MTBE Date: Hist Max MTBE Conc in Gro Hist Max MTBE Conc in Soi	bundwater: il:	Not reported Not reported
Historical Max MTBE Date: Hist Max MTBE Conc in Gro Hist Max MTBE Conc in So Significant Interim Remedia	bundwater: il: I Action Taken:	Not reported Not reported Not reported Not reported
Historical Max MTBE Date: Hist Max MTBE Conc in Gro Hist Max MTBE Conc in So Significant Interim Remedia GW Qualifier:	oundwater: il: I Action Taken: Not reported	Not reported Not reported Not reported Not reported
Historical Max MTBE Date: Hist Max MTBE Conc in Gro Hist Max MTBE Conc in So Significant Interim Remedia GW Qualifier: Soil Qualifier:	oundwater: il: I Action Taken: Not reported Not reported	Not reported Not reported Not reported Not reported
Historical Max MTBE Date: Hist Max MTBE Conc in Gro Hist Max MTBE Conc in Soi Significant Interim Remedia GW Qualifier: Soil Qualifier: Organization:	oundwater: il: I Action Taken: Not reported Not reported Not reported	Not reported Not reported Not reported Not reported
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Historical Max MTBE Date: Hist Max MTBE Conc in Gro Hist Max MTBE Conc in Soi Significant Interim Remedia GW Qualifier: Soil Qualifier: Organization: Owner Contact: Responsible Party: RP Address:	oundwater: il: I Action Taken: Not reported Not reported Not reported EDWARD PADEN 2255 N. ONTARIO ST	Not reported Not reported Not reported
Historical Max MTBE Date: Hist Max MTBE Conc in Gro Hist Max MTBE Conc in Soi Significant Interim Remedia GW Qualifier: Soil Qualifier: Organization: Owner Contact: Responsible Party: RP Address: Program:	oundwater: il: I Action Taken: Not reported Not reported Not reported EDWARD PADEN 2255 N. ONTARIO ST LUST	Not reported Not reported Not reported
Historical Max MTBE Date: Hist Max MTBE Conc in Gro Hist Max MTBE Conc in Gro Significant Interim Remedia GW Qualifier: Soil Qualifier: Organization: Owner Contact: Responsible Party: RP Address: Program: Lat/Long:	oundwater: il: I Action Taken: Not reported Not reported Not reported EDWARD PADEN 2255 N. ONTARIO ST LUST 0 / 0	Not reported Not reported Not reported
Historical Max MTBE Date: Hist Max MTBE Conc in Gro Hist Max MTBE Conc in Gro Significant Interim Remedia GW Qualifier: Soil Qualifier: Organization: Owner Contact: Responsible Party: RP Address: Program: Lat/Long: Local Agency Staff:	bundwater: il: I Action Taken: Not reported Not reported Not reported EDWARD PADEN 2255 N. ONTARIO ST LUST 0 / 0 Not reported	Not reported Not reported Not reported
Historical Max MTBE Date: Hist Max MTBE Conc in Gro Hist Max MTBE Conc in Gro Significant Interim Remedia GW Qualifier: Soil Qualifier: Organization: Owner Contact: Responsible Party: RP Address: Program: Lat/Long: Local Agency Staff: Beneficial Use:	bundwater: il: I Action Taken: Not reported Not reported Not reported EDWARD PADEN 2255 N. ONTARIO ST LUST 0 / 0 Not reported Not reported Not reported	Not reported Not reported Not reported
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Historical Max MTBE Date: Hist Max MTBE Conc in Gro Hist Max MTBE Conc in Gro Significant Interim Remedia GW Qualifier: Soil Qualifier: Organization: Owner Contact: Responsible Party: RP Address: Program: Lat/Long: Local Agency Staff: Beneficial Use: Priority: Cleanup Fund Id:	bundwater: il: I Action Taken: Not reported Not reported Not reported EDWARD PADEN 2255 N. ONTARIO ST LUST 0 / 0 Not reported Not reported Not reported Not reported Not reported Not reported Not reported	Not reported Not reported Not reported
Historical Max MTBE Date: Hist Max MTBE Conc in Gro Hist Max MTBE Conc in Gro Significant Interim Remedia GW Qualifier: Soil Qualifier: Organization: Owner Contact: Responsible Party: RP Address: Program: Lat/Long: Local Agency Staff: Beneficial Use: Priority: Cleanup Fund Id: Suspended:	bundwater: il: I Action Taken: Not reported Not reported Not reported EDWARD PADEN 2255 N. ONTARIO ST LUST 0 / 0 Not reported Not reported Not reported Not reported Not reported Not reported Not reported Not reported	Not reported Not reported Not reported
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Historical Max MTBE Date: Hist Max MTBE Conc in Gro Hist Max MTBE Conc in Gro Significant Interim Remedia GW Qualifier: Soil Qualifier: Organization: Owner Contact: Responsible Party: RP Address: Program: Lat/Long: Local Agency Staff: Beneficial Use: Priority: Cleanup Fund Id: Suspended: Assigned Name: Summary:	bundwater: il: I Action Taken: Not reported Not reported Not reported EDWARD PADEN 2255 N. ONTARIO ST LUST 0 / 0 Not reported Not reported	Not reported Not reported Not reported
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Historical Max MTBE Date: Hist Max MTBE Conc in Gro Hist Max MTBE Conc in Gro Significant Interim Remedia GW Qualifier: Organization: Owner Contact: Responsible Party: RP Address: Program: Lat/Long: Local Agency Staff: Beneficial Use: Priority: Cleanup Fund Id: Suspended: Assigned Name: Summary:	bundwater: il: I Action Taken: Not reported Not reported Not reported EDWARD PADEN 2255 N. ONTARIO ST LUST 0 / 0 Not reported Not reported	Not reported Not reported Not reported
Historical Max MTBE Date: Hist Max MTBE Conc in Gro Hist Max MTBE Conc in Gro Significant Interim Remedia GW Qualifier: Organization: Owner Contact: Responsible Party: RP Address: Program: Lat/Long: Local Agency Staff: Beneficial Use: Priority: Cleanup Fund Id: Suspended: Assigned Name: Summary: UST: Facility ID:	bundwater: il: I Action Taken: Not reported Not reported Not reported EDWARD PADEN 2255 N. ONTARIO ST LUST 0 / 0 Not reported Not reported	Not reported Not reported Not reported
Historical Max MTBE Date: Hist Max MTBE Conc in Gro Hist Max MTBE Conc in Gro Significant Interim Remedia GW Qualifier: Soil Qualifier: Organization: Owner Contact: Responsible Party: RP Address: Program: Lat/Long: Local Agency Staff: Beneficial Use: Priority: Cleanup Fund Id: Suspended: Assigned Name: Summary: UST: Facility ID: Permitting Agency:	23924 LOS ANGELES CI	Not reported Not reported Not reported
Historical Max MTBE Date: Hist Max MTBE Conc in Gro Hist Max MTBE Conc in Gro GW Qualifier: Soil Qualifier: Organization: Owner Contact: Responsible Party: RP Address: Program: Lat/Long: Local Agency Staff: Beneficial Use: Priority: Cleanup Fund Id: Suspended: Assigned Name: Summary: UST: Facility ID: Permitting Agency: Latitude:	bundwater: il: I Action Taken: Not reported Not reported Not reported EDWARD PADEN 2255 N. ONTARIO ST LUST 0 / 0 Not reported Not r	Not reported Not reported Not reported 
Historical Max MTBE Date: Hist Max MTBE Conc in Gro Hist Max MTBE Conc in Gro Significant Interim Remedia GW Qualifier: Soil Qualifier: Organization: Owner Contact: Responsible Party: RP Address: Program: Lat/Long: Local Agency Staff: Beneficial Use: Priority: Cleanup Fund Id: Suspended: Assigned Name: Summary: UST: Facility ID: Permitting Agency: Latitude: Longitude:	23924 LOS ANGELES, CI 34.041509 -118 21024	Not reported Not reported Not reported

## SHELL SERVICE STATION (Continued)

Database(s)

EDR ID Number EPA ID Number

H42 ESE 1/4-1/2 0.281 mi.	M & Y SERVICE STATION 2701 001ST ST E LOS ANGELES, CA 90033		LUST	S105036164 N/A
1482 ft.	Site 1 of 2 in cluster H			
Relative: Higher Actual: 313 ft.	LUST: Region: Global Id: Latitude: Longitude: Case Type: Status: Status Date: Lead Agency: Case Worker: Local Agency: RB Case Number:	STATE T0603700833 34.0420041 -118.2059948 LUST Cleanup Site Completed - Case Closed 01/14/1997 LOS ANGELES RWQCB (REGION 4) YR LOS ANGELES, CITY OF 900330143		
	LOC Case Number: File Location: Potential Media Affect: Potential Contaminants of Concern: Site History:	Not reported Not reported Aquifer used for drinking water supply Gasoline Not reported		
	Click here to access the California G	eoTracker records for this facility:		
	Contact: Global Id: Contact Type: Contact Name: Organization Name: Address: City: Email: Phone Number: Global Id: Contact Type: Contact Name: Organization Name: Address: City: Email: Phone Number:	T0603700833 Local Agency Caseworker ELOY LUNA LOS ANGELES, CITY OF 200 North Main Street, Suite 1780 LOS ANGELES eloy.luna@lacity.org Not reported T0603700833 Regional Board Caseworker YUE RONG LOS ANGELES RWQCB (REGION 4) 320 W. 4TH ST., SUITE 200 Los Angeles yrong@waterboards.ca.gov Not reported		
	Status History: Global Id: Status: Status Date: Global Id: Status: Status Date: Global Id: Status: Status: Status Date:	T0603700833 Completed - Case Closed 01/14/1997 T0603700833 Open - Case Begin Date 08/21/1991 T0603700833 Open - Remediation 09/12/1995		

Database(s)

EDR ID Number EPA ID Number

Regulatory Activities:	
Global Id:	T0603700833
Action Type:	Other
Date:	08/21/1991
Action:	Leak Reported

LL	JST REG 4:		
	Region:	4	
	Regional Board:	04	
	County:	Los Angeles	
	Facility Id:	900330143	
	Status:	Case Closed	
	Substance:	Gasoline	
	Substance Quantity:	Not reported	
	Local Case No:	Not reported	
	Case Type:	Groundwater	
	Abatement Method Used at	the Site:	VE
	Global ID:	T0603700833	
	W Global ID:	Not reported	
	Staff:	UNK	
	Local Agency:	19050	
	Cross Street:	MOTT ST	
	Enforcement Type:	Not reported	
	Date Leak Discovered:	Not reported	
	Date Leak First Reported:		8/21/1991
	Date Leak Record Entered:	1/18/1996	0,2,1,1001
	Date Confirmation Began	Not reported	
	Date Leak Stopped:	Not reported	
	Date Case Last Changed or	Database:	2/6/1997
	Date the Case was Closed		1/14/1997
	How Leak Discovered:	Not reported	
	How Leak Stopped:	Not reported	
	Cause of Leak:	Not reported	
	Leak Source:	Not reported	
	Operator:	Not reported	
	Water System:	Not reported	
	Well Name	Not reported	
	Approx. Dist To Production	Well (ft):	7538,9172814599735755553043085
	Source of Cleanup Funding		Not reported
	Preliminary Site Assessmen	t Workplan Submitted	Not reported
	Preliminary Site Assessmen	it Regan:	Not reported
	Pollution Characterization B	edan.	Not reported
	Remediation Plan Submitter	4.	Not reported
	Remedial Action Underway:		9/12/1995
	Post Remedial Action Monit	oring Began	Not reported
	Enforcement Action Date:	oning Dogain.	Not reported
	Historical Max MTBE Date:		1/1/1965
	Hist Max MTBE Conc in Gro	undwater.	16
	Hist Max MTBE Conc in Soi	l.	Not reported
	Significant Interim Remedial	Action Taken	Not reported
	GW Qualifier:	Not reported	norroponod
	Soil Qualifier	Not reported	
	Organization:	Not reported	
	Owner Contact	Not reported	
	Responsible Party:	M & Y SERVICE STA	TION
	responsion arty.	In a 1 OFICIOF OIX	

Map ID Direction	n MAP FINDINGS			
Elevation	Site		Database(s)	EDR ID Number EPA ID Number
	M & Y SERVICE STATION (Continue	ed)		S105036164
	RP Address:270Program:LUSLat/Long:34.0Local Agency Staff:PEJBeneficial Use:NotPriority:NotCleanup Fund Id:NotSuspended:NotAssigned Name:NotSummary:01/0WEI	1 E 1ST ST, LOS ANGELES CA 90033 T 420041 / -1 reported reported reported reported 3/97 GROUNDWATER MONITORING _L ABANDONMENT	02/06/97	
H43 ESE 1/4-1/2	M & Y SERVICE STATION 2701 001ST LOS ANGELES, CA 90033		HIST UST HIST CORTESE	U001561360 N/A
0.281 mi. 1482 ft.	Site 2 of 2 in cluster H			
Relative: Higher	HIST UST: File Number:	Not reported		
Actual: 313 ft.	Region: Facility ID: Facility Type: Other Type: Contact Name: Telephone: Owner Name: Owner Address: Owner City,St,Zip: Total Tanks: Tank Num: Container Num:	Not reported STATE 00000063614 Gas Station Not reported 2132629461 JIM J. YOSHIDA 2701 EAST FIRST ST. LOS ANGELES, CA 90033 0003 001 1		
	Year Installed: Tank Capacity: Tank Used for: Type of Fuel: Container Construction Thicknes Leak Detection:	Not reported 00001000 PRODUCT PREMIUM s: Not reported None		
	Tank Num: Container Num: Year Installed: Tank Capacity: Tank Used for: Type of Fuel: Container Construction Thicknes Leak Detection:	002 2 Not reported 00001000 PRODUCT REGULAR s: Not reported None		
	Tank Num: Container Num: Year Installed: Tank Capacity: Tank Used for: Type of Fuel: Container Construction Thicknes Leak Detection:	003 3 Not reported 00001000 PRODUCT UNLEADED s: Not reported None		

Database(s)

EDR ID Number EPA ID Number

Region: C   Facility County Code: 19   Reg By: L   Reg Id: 90   HELL - KOBASSI 90   005 4TH STREET, EAST 00   OS ANGELES, CA 10   ite 1 of 2 in cluster I 1000000000000000000000000000000000000	ORTESE 9 INKA 00330143	LUST	S1076
Facility County Code: 19 Reg By: L <sup>-</sup> Reg Id: 90 HELL - KOBASSI 005 4TH STREET, EAST OS ANGELES, CA ite 1 of 2 in cluster I	9 FNKA 00330143	LUST	S1076
Reg By: L <sup>-</sup> Reg Id: 90 HELL - KOBASSI 005 4TH STREET, EAST OS ANGELES, CA ite 1 of 2 in cluster I	INKA 00330143	LUST	S1076
Reg ld: 90 HELL - KOBASSI 005 4TH STREET, EAST OS ANGELES, CA ite 1 of 2 in cluster I	00330143	LUST	S1076
HELL - KOBASSI 005 4TH STREET, EAST OS ANGELES, CA ite 1 of 2 in cluster I		LUST	S1076
ite 1 of 2 in cluster I		LUSI	310/0
os ANGELES, CA ite 1 of 2 in cluster I			N/A
ite 1 of 2 in cluster I			N/A
LUSI:			
Region:	STATE		
Global Id:	T0603732654		
Latitude:	34.042984		
Longitude:	-118.216054		
Case Type:	LUST Cleanup Site		
Status:	Completed - Case Closed		
Status Date:	08/24/2012		
Lead Agency:	LOS ANGELES RWQCB (REGION 4)		
Case Worker:	AT		
Local Agency:	LOS ANGELES, CITY OF		
RB Case Number:	900330307A		
LOC Case Number:	30343		
File Location:	Regional Board		
Potential Media Affect:	Other Groundwater (uses other than drinking water), Soil		
Potential Contaminants of Conce	ern: Gasoline		
Site History:	Not reported		
Click here to access the Californi	a GeoTracker records for this facility:		
Contact:			
Global Id:	T0603732654		
Contact Type:	Regional Board Caseworker		
Contact Name:	ARMAN TOUMARI		
Organization Name:	LOS ANGELES RWQCB (REGION 4)		
Address:	320 WEST 4TH STREET, SUITE 200		
City:	LOS ANGELES		
Email:	atoumari@waterboards.ca.gov		
Phone Number:	2135766708		
Global Id:	T0603732654		
Contact Type:	Local Agency Caseworker		
Contact Name:	ELOY LUNA		
Organization Name:	LOS ANGELES, CITY OF		
Address:	200 North Main Street, Suite 1780		
City:	LOS ANGELES		
Email:	eloy.luna@lacity.org		
Phone Number:	Not reported		
Status History:			
Global Id:	T0603732654		
Status:	Completed - Case Closed		
Status Date:	08/24/2012		

Open - Case Begin Date

**Open - Site Assessment** 

**Open - Site Assessment** 

**Open - Site Assessment** 

Other Report / Document

Monitoring Report - Quarterly

Monitoring Report - Quarterly

Monitoring Report - Quarterly

Monitoring Report - Quarterly

Monitoring Report - Quarterly

Monitoring Report - Quarterly

Soil and Water Investigation Workplan

06/02/2003

09/01/2003

07/13/2007

04/24/2008

T0603732654

T0603732654

T0603732654

T0603732654

T0603732654

RESPONSE 10/15/2007

T0603732654

T0603732654

T0603732654

RESPONSE

10/15/2008

T0603732654

RESPONSE 01/15/2009

T0603732654 RESPONSE

T0603732654 RESPONSE

04/15/2010

04/24/2008

RESPONSE 10/15/2009

RESPONSE

10/15/2011

RESPONSE

01/16/2007

Database(s)

EDR ID Number EPA ID Number

#### SHELL - KOBASSI (Continued)

Status: Status Date:

Global Id: Status: Status Date:

Global Id: Status: Status Date:

Global Id: Status: Status Date:

Regulatory Activities: Global Id: Action Type: Date: Action:

> Global Id: Action Type: Date: Action:

Global Id: Action Type: Date: Action:

Global Id: Action Type: Date: Action:

Global Id: Action Type: Date: Action:

Global Id: Action Type: Date: Action:

Global Id: Action Type: Date: Action:

Global Id: Action Type: Date: Action:

Global Id:

T0603732654

Database(s)

EDR ID Number EPA ID Number

#### SHELL - KOBASSI (Continued)

Action Type:

Date:

Action:

Date:

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Action:

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Action:

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Global Id:

Action Type:

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Global Id:

Action Type: Date:

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Global Id:

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Action Type:

Action:

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Global Id:

Action Type:

RESPONSE 04/15/2008 Monitoring Report - Quarterly T0603732654 RESPONSE 04/15/2009 Monitoring Report - Quarterly T0603732654 RESPONSE 01/15/2008 Soil and Water Investigation Report T0603732654 RESPONSE 10/15/2010 Monitoring Report - Quarterly T0603732654 RESPONSE 03/19/2012 Site Assessment Report T0603732654 RESPONSE 04/15/2012 Monitoring Report - Quarterly T0603732654 ENFORCEMENT 08/24/2012 Closure/No Further Action Letter T0603732654 ENFORCEMENT 07/10/2012 Notification - Preclosure T0603732654 RESPONSE 07/15/2008 Monitoring Report - Quarterly T0603732654 RESPONSE 04/15/2011 Monitoring Report - Quarterly T0603732654 RESPONSE 11/19/2012 Well Destruction Report T0603732654 RESPONSE 07/13/2007

Database(s)

EDR ID Number EPA ID Number

#### SHELL - KOBASSI (Continued)

Action:	Soil and Water Investigation Workplan
Global Id:	T0603732654
Action Type:	Other
Date:	06/15/2003
Action:	Leak Reported
Global Id:	T0603732654
Action Type:	RESPONSE
Date:	07/15/2009
Action:	Monitoring Report - Quarterly
Global Id:	T0603732654
Action Type:	ENFORCEMENT
Date:	11/16/2006
Action:	Staff Letter
Global Id:	T0603732654
Action Type:	Other
Date:	06/02/2003
Action:	Leak Discovery
Global Id:	T0603732654
Action Type:	ENFORCEMENT
Date:	08/24/2012
Action:	Closure/No Further Action Letter
Global Id:	T0603732654
Action Type:	RESPONSE
Date:	01/15/2008
Action:	Monitoring Report - Quarterly
Global Id:	T0603732654
Action Type:	REMEDIATION
Date:	06/12/2003
Action:	Excavation

I45 West 1/4-1/2 0.315 mi. 1662 ft.	SHELL SERVICE STATION 2005 E FOURTH / CUMMINGS LOS ANGELES, CA 90033 Site 2 of 2 in cluster I		
Relative:	RCRA-SQG:		
Lower	Date form received by agency: 02/26/2004		
	Facility name:	SHELL SERVICE STATION	
Actual: 282 ft.	Facility address:	2005 E FOURTH / CUMMINGS SAP #135549 LOS ANGELES, CA 90033	
	EPA ID:	CAD981405012	
	Mailing address:	SHELL OIL PRODUCTS US 12700 NORTHBOROUGH DR MFT240G HOUSTON, TX 770672508	
	Contact:	ED A PADEN	
	Contact address:	Not reported Not reported	
	Contact country:	US	

#### S107619947

RCRA-SQG 1000288385 LUST CAD981405012

Database(s)

EDR ID Number EPA ID Number

SHELL SERVICE STATION (Continued)		1000288385
Contact telephone: Contact email: EPA Region: Classification: Description:	(310) 816-2075 EAPADEN@SHELLOPUS.COM 09 Small Small Quantity Generator Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time	
Owner/Operator Summary:		
Owner/operator name:	SHELL OIL PRODUCTS US	
Owner/operator address:	Not reported	
Owner/operator country:	US	
Owner/operator telephone: Legal status:	Not reported Private	
Owner/Operator Type:	Operator	
Owner/Op start date:	08/01/1998	
Owner/Op end date:	Not reported	
Owner/operator name:	EQUILON ENTERPRISES LLC DBA SHELL OIL PR	
Owner/operator address:	PO BOX 2648	
	HOUSTON, TX 77252	
Owner/operator country:	US	
Owner/operator telephone:	Not reported	
Legal status:	Private	
Owner/Operator Type:		
Owner/Op end date:	Not reported	
	Not reported	
Handler Activities Summary:		
U.S. importer of hazardous w	vaste: No	
Mixed waste (haz. and radioa	active): No	
Recycler of hazardous waste	: No	
Transporter of hazardous wa	ste: No	
Treater, storer or disposer of	HW: No	
Underground injection activity	/: NO	
Furnace exemption:	No	
Used oil fuel burner:	No	
Used oil processor:	No	
User oil refiner:	No	
Used oil fuel marketer to burr	ner: No	
Used oil Specification market	er: No	
Used oil transfer facility:	No	
Used oil transporter:	No	
. Waste code:	D001	
. Waste name:	IGNITABLE WASTE	
. Waste code:	D018	
. Waste name:	BENZENE	

Historical Generators:

Date form received by agency: 02/26/2004

Database(s)

EDR ID Number EPA ID Number

#### SHELL SERVICE STATION (Continued)

	Site name: Classification:	SHELL SERVICE STATION Small Quantity Generator
	Date form received by agency Site name: Classification:	:09/18/2000 FORMER SHELL SERVICE STATION Small Quantity Generator
	<ul><li>Waste code:</li><li>Waste name:</li></ul>	D000 Not Defined
	<ul><li>Waste code:</li><li>Waste name:</li></ul>	D001 IGNITABLE WASTE
	. Waste code: . Waste name:	D018 BENZENE
	Date form received by agency Site name: Classification:	:09/01/1996 FORMER SHELL SERVICE STATION Small Quantity Generator
	Date form received by agency Site name: Classification:	:04/13/1990 SHELL OIL CO 204-4539-9601 Large Quantity Generator
	Violation Status:	No violations found
LU	JST: Region: Global Id: Latitude: Longitude: Case Type: Status: Status Date: Lead Agency: Case Worker: Local Agency: RB Case Number: LOC Case Number: File Location: Potential Media Affect: Potential Contaminants of Cor Site History:	STATE T0603700849 34.0425812 -118.2161581 LUST Cleanup Site Completed - Case Closed 05/31/1990 LOS ANGELES, CITY OF EL LOS ANGELES, CITY OF 900330307 Not reported Not reported Soil Incern: Gasoline Not reported
	Click here to access the Califo	rnia Geo Fracker records for this facility:

#### Contact: Global Id

Global Id:	T0603700849
Contact Type:	Local Agency Caseworker
Contact Name:	ELOY LUNA
Organization Name:	LOS ANGELES, CITY OF
Address:	200 North Main Street, Suite 1780
City:	LOS ANGELES
Email:	eloy.luna@lacity.org
Phone Number:	Not reported

Global Id: T0603700849 Contact Type: Regional Board Caseworker

Database(s)

EDR ID Number EPA ID Number

#### SHELL SERVICE STATION (Continued)

Contact Name: Organization Name: Address: City: Email: Phone Number:	YUE RON LOS ANG 320 W. 4T Los Angel yrong@wa Not report	IG ELES RWQCB (REGION 4) TH ST., SUITE 200 les aterboards.ca.gov red	
Status History: Global Id: Status:	T0603700 Completer	1849 d - Case Closed	
Status Date:	05/31/199	0	
Global Id: Status: Status Date:	T0603700 Open - Ca 02/01/198	9849 ase Begin Date 9	
Global Id: Status: Status Date:	T0603700 Open - Sit 04/17/198	1849 te Assessment 19	
Regulatory Activities: Global Id: Action Type: Date: Action:	T0603700 Other 02/01/198 Leak Disc	9849 9 overy	
Global Id: Action Type: Date: Action:	T0603700 Other 04/17/198 Leak Repo	9849 9 orted	
LUST REG 4: Region: Regional Board: County: Facility Id: Status: Substance: Substance: Substance Quantity: Local Case No: Case Type: Abatement Method Used at Global ID:	4 04 Los Angeles 900330307 Case Closed Gasoline Not reported Not reported Soil the Site: T0603700849	Not reported	
W Global ID: Staff: Local Agency: Cross Street: Enforcement Type: Date Leak Discovered:	W0605100649 UNK 19050 CUMMINGS Not reported 2/1/1989		
Date Leak First Reported: Date Leak Record Entered: Date Confirmation Began: Date Leak Stopped:	12/12/1991 Not reported Not reported	4/17/1989	
Date Case Last Changed or Date the Case was Closed:	Database:	10/25/1991 5/31/1990	

#### 5/31/1990

Database(s)

EDR ID Number EPA ID Number

1000288385

#### SHELL SERVICE STATION (Continued)

How Leak Discovered:	Subsurface Monitoring	)
How Leak Stopped:	Not reported	
Cause of Leak:	UNK	
Leak Source:	UNK	
Operator:	KOBAISSI, MAHMOU	D M.
Water System:	DAVE GRIFFITH L A	DWP
Well Name:	Not reported	
Approx. Dist To Production	Well (ft):	10252.55502416246825687665718
Source of Cleanup Funding	:	UNK
Preliminary Site Assessmer	nt Workplan Submitted:	Not reported
Preliminary Site Assessmer	nt Began:	4/17/1989
Pollution Characterization B	egan:	Not reported
Remediation Plan Submittee	d:	Not reported
Remedial Action Underway:		Not reported
Post Remedial Action Monit	oring Began:	Not reported
Enforcement Action Date:		Not reported
Historical Max MTBE Date:		Not reported
Hist Max MTBE Conc in Gro	oundwater:	Not reported
Hist Max MTBE Conc in Soi	il:	Not reported
Significant Interim Remedia	I Action Taken:	Not reported
GW Qualifier:	Not reported	
Soil Qualifier:	Not reported	
Organization:	Not reported	
Owner Contact:	Not reported	
Responsible Party:	SHELL OIL CO.	
RP Address:	SAME AS ABOVE	
Program:	LUST	
Lat/Long:	34.0425812 / -1	
Local Agency Staff:	PEJ	
Beneficial Use:	Not reported	
Priority:	Not reported	
Cleanup Fund Id:	Not reported	
Suspended:	Not reported	
Assigned Name:	2600649-001GEN	
Summary:	Not reported	

# 46EAST L A RECYCLING CENTERESE2750 E 1ST ST1/4-1/2LOS ANGELES, CA 90033

Plastic:

0.351 mi. 1852 ft.

#### SWRCY: **Relative:** Reg Id: 25046 Higher Cert Id: RC11354 Actual: Mailing Address: 3249 W El Segundo Blvd 315 ft. Mailing City: Hawthorne Mailing State: CA Mailing Zip Code: 90250 Website: Not reported Email: Not reported Phone Number: (213) 235-0050 Grand Father: Ň Rural: Ν **Operation Begin Date:** 12/01/2002 Aluminium: Υ Glass: Y

Υ

SWRCY S107136883 N/A

Map ID		MAP FINDINGS		
Direction Distance Elevation	Site		Database(s)	EDR ID Number EPA ID Number
	EAST L A RECYCLING CENTER (Conti	inued)		S107136883
	Bimetal: Agency: Monday Hours Of Operation: Tuesday Hours Of Operation: Wednesday Hours Of Operation: Thursday Hours Of Operation: Friday Hours Of Operation: Saturday Hours Of Operation: Sunday Hours Of Operation: Organization ID: Organization Name:	Y N/A 9:00 am - 4:45 pm; Closed 1:00 pm - 1:30 pm 9:00 am - 4:45 pm; Closed 1:00 pm - 1:30 pm 9:00 am - 4:45 pm; Closed 1:00 pm - 1:30 pm 9:00 am - 4:45 pm; Closed 1:00 pm - 1:30 pm 9:00 am - 4:45 pm; Closed 1:00 pm - 1:30 pm 9:00 am - 4:45 pm; Closed 1:00 pm - 1:30 pm CLOSED 31689 E & M Recycling Company		
47 WNW 1/4-1/2 0.433 mi. 2285 ft.	VEGA AUTO SERVICE 1869 001ST ST E LOS ANGELES, CA 90033		LUST ENF HIST CORTESE	S102440859 N/A
Relative: Higher	LUST: Region:	STATE		
Actual: 307 ft.	Global Id: Latitude: Longitude: Case Type: Status: Status Date: Lead Agency: Case Worker: Local Agency: RB Case Number: LOC Case Number: File Location: Potential Media Affect: Potential Contaminants of Concern: Site History: Click here to access the California G	T0603700838 34.04681 -118.2179822 LUST Cleanup Site Completed - Case Closed 01/10/2012 LOS ANGELES RWQCB (REGION 4) AT LOS ANGELES, CITY OF 900330198 Not reported Regional Board Aquifer used for drinking water supply Gasoline Not reported SeoTracker records for this facility:		
	Contact: Global Id: Contact Type: Contact Name: Organization Name: Address: City: Email: Phone Number: Global Id:	T0603700838 Regional Board Caseworker ARMAN TOUMARI LOS ANGELES RWQCB (REGION 4) 320 WEST 4TH STREET, SUITE 200 LOS ANGELES atoumari@waterboards.ca.gov 2135766708		
	Contact Type: Contact Name: Organization Name: Address: City: Email: Phone Number:	Local Agency Caseworker ELOY LUNA LOS ANGELES, CITY OF 200 North Main Street, Suite 1780 LOS ANGELES eloy.luna@lacity.org Not reported		

Database(s)

EDR ID Number EPA ID Number

S102440859

#### **VEGA AUTO SERVICE (Continued)**

Status History: Global Id:

Status:

Status Date:

Status Date:

Status Date:

Status Date:

Status Date:

Global Id:

Global Id:

Global Id:

Global Id:

Global Id: Status:

Global Id: Status:

Status Date:

Status Date:

Regulatory Activities: Global Id:

Action Type:

Date:

Date:

Date:

Action:

Date:

Date:

Action:

Action:

Global Id:

Action Type:

Global Id:

Action Type:

Action:

Global Id:

Action Type:

Action:

Global Id:

Action Type:

Status:

Status:

Status:

Status:

T0603700838 Completed - Case Closed 01/10/2012

T0603700838 Open - Case Begin Date 03/05/1992

T0603700838 Open - Remediation 04/16/1998

T0603700838 Open - Remediation 11/16/1998

T0603700838 Open - Site Assessment 03/05/1992

T0603700838 Open - Site Assessment 08/08/1994

T0603700838 Open - Site Assessment 08/04/2008

T0603700838 RESPONSE 05/18/2011 Clean Up Fund - 5-Year Review Summary

T0603700838 RESPONSE 04/15/2010 Monitoring Report - Semi-Annually

T0603700838 ENFORCEMENT 09/16/2008 Notice to Comply

T0603700838 ENFORCEMENT 04/05/2011 Staff Letter

T0603700838 Other 05/16/1994 Leak Discovery

T0603700838

ENFORCEMENT 06/15/2009 Database(s)

EDR ID Number EPA ID Number

S102440859

#### **VEGA AUTO SERVICE (Continued)**

Action Type:

Date:

Date:

Staff Letter Action: T0603700838 Global Id: ENFORCEMENT Action Type: Date: 07/29/2008 Action: Site Visit / Inspection / Sampling Global Id: T0603700838 Action Type: RESPONSE 05/18/2010 Date: Action: Clean Up Fund - 5-Year Review Summary T0603700838 Global Id: Action Type: RESPONSE Date: 01/08/2009 Action: Clean Up Fund - 5-Year Review Summary Global Id: T0603700838 Action Type: ENFORCEMENT 08/04/2008 Date: Action: Staff Letter T0603700838 Global Id: Action Type: RESPONSE Date: 10/15/2008 Action: Monitoring Report - Quarterly T0603700838 Global Id: RESPONSE Action Type: Date: 01/15/2010 Action: Monitoring Report - Semi-Annually T0603700838 Global Id: Other Action Type: Date: 08/19/1994 Action: Leak Reported T0603700838 Global Id: RESPONSE Action Type: Date: 04/15/2009 Action: Monitoring Report - Quarterly Global Id: T0603700838 RESPONSE Action Type: Date: 07/15/2010 Action: Monitoring Report - Semi-Annually Global Id: T0603700838 Action Type: RESPONSE Date: 07/15/2009 Monitoring Report - Semi-Annually Action: T0603700838 Global Id: Action Type: RESPONSE

07/15/2011

Database(s)

EDR ID Number **EPA ID Number** 

#### **VEGA AUTO SERVICE (Continued)**

LUST REG 4: Region:

Local Case No:

Not reported

Action:	Monitoring Report - Semi-Annually
Global Id:	T0603700838
Action Type:	RESPONSE
Date:	10/15/2009
Action:	Soil and Water Investigation Workplan
Global Id:	T0603700838
Action Type:	ENFORCEMENT
Date:	05/08/2006
Action:	Site Visit / Inspection / Sampling
Global Id:	T0603700838
Action Type:	RESPONSE
Date:	08/16/2002
Action:	Other Report / Document
Global Id:	T0603700838
Action Type:	ENFORCEMENT
Date:	07/18/2002
Action:	Staff Letter
Global Id:	T0603700838
Action Type:	ENFORCEMENT
Date:	01/10/2012
Action:	Closure/No Further Action Letter
Global Id:	T0603700838
Action Type:	RESPONSE
Date:	07/15/2011
Action:	Well Installation Report
Global Id:	T0603700838
Action Type:	RESPONSE
Date:	07/15/2003
Action:	Monitoring Report - Quarterly
Global Id:	T0603700838
Action Type:	REMEDIATION
Date:	01/01/2001
Action:	Soil Vapor Extraction (SVE)
Global Id:	T0603700838
Action Type:	REMEDIATION
Date:	01/01/2001
Action:	Soil Vapor Extraction (SVE)
JST REG 4: Region: Regional Board: County: Facility Id: Status: Substance: Substance Quantity:	4 04 Los Angeles 900330198 Remedial action (cleanup) Underway Gasoline Not reported

Database(s)

EDR ID Number EPA ID Number

S102440859

#### VEGA AUTO SERVICE (Continued)

Case Type:	Groundwater	
Abatement Method Used at	the Site:	Not reported
Global ID:	T0603700838	
W Global ID:	W0605100649	
Staff:	AT	
Local Agency:	19050	
Cross Street:	STATE STREET	
Enforcement Type:	LET	
Date Leak Discovered:	5/16/1994	
Date Leak First Reported:		8/19/1994
Date Leak Record Entered:	10/19/1994	
Date Confirmation Began:	Not reported	
Date Leak Stopped:	Not reported	
Date Case Last Changed or	n Database:	10/6/2000
Date the Case was Closed:		Not reported
How Leak Discovered:	Not reported	
How Leak Stopped:	Not reported	
Cause of Leak:	Not reported	
Leak Source:	Not reported	
Operator:	JOAQUIN VEGA	
Water Svstem:	DAVE GRIFFITH L A I	D W P
Well Name:	Not reported	
Approx. Dist To Production	Well (ft):	8886.014855915348744630394907
Source of Cleanup Funding:		Not reported
Preliminary Site Assessmen	t Workplan Submitted:	Not reported
Preliminary Site Assessmen	it Began:	3/5/1992
Pollution Characterization B	egan:	8/8/1994
Remediation Plan Submittee	d:	4/16/1998
Remedial Action Underway:		11/16/1998
Post Remedial Action Monit	oring Began:	Not reported
Enforcement Action Date:		Not reported
Historical Max MTBE Date:		1/1/1965
Hist Max MTBE Conc in Gro	oundwater:	10
Hist Max MTBE Conc in Soi	l:	Not reported
Significant Interim Remedia	Action Taken:	Not reported
GW Qualifier:	<	
Soil Qualifier:	Not reported	
Organization:	Not reported	
Owner Contact	Not reported	
Responsible Party:	JOAQUIN VEGA SR	
RP Address:	1869 F FIRST ST	
Program.	LUST	
l at/Long	34 04681 / -1	
Local Agency Staff	PF.I	
Beneficial Use	Not reported	
Priority:	Not reported	
Cleanup Fund Id:	Not reported	
Suspended	Not reported	
Assigned Name:	2600649-001GEN	
Summary:	8/15/99 2ND QTR GW	/ MON RPT: 9/30/99 3RD QTR GW MON RPT: 1/30/00 4TH
	QTR GW MON RPT 1	999: 5/6/00 1ST QTR GW MON RPT 2000: 9/13/00 2ND OTR
	GW MON RPT 2000	11/13/00 3RD QTR GW MON RPT 2000
	,	

#### ENF:

Region:	4
Facility Id:	270295
Agency Name:	Vega Auto Service

Database(s)

EDR ID Number EPA ID Number

#### **VEGA AUTO SERVICE (Continued)**

Place Type: Place Subtype: Facility Type: Agency Type: # Of Agencies: Place Latitude: Place Longitude: SIC Code 1: SIC Desc 1: SIC Code 2: SIC Desc 2: SIC Code 3: SIC Desc 3: NAICS Code 1: NAICS Desc 1: NAICS Code 2: NAICS Desc 2: NAICS Code 3: NAICS Desc 3: # Of Places: Source Of Facility: Design Flow: Threat To Water Quality: Complexity: Pretreatment: Facility Waste Type: Facility Waste Type 2: Facility Waste Type 3: Facility Waste Type 4: Program: Program Category1: Program Category2: # Of Programs: WDID: Reg Measure Id: Reg Measure Type: Region: Order #: Npdes# CA#: Major-Minor: Npdes Type: Reclamation: Dredge Fill Fee: 301H: Application Fee Amt Received: Status: Status Date: Effective Date: Expiration/Review Date: Termination Date: WDR Review - Amend: WDR Review - Revise/Renew: WDR Review - Rescind: WDR Review - No Action Required: WDR Review - Pending: WDR Review - Planned: Status Enrollee:

Facility Not reported Not reported Privately-Owned Business 1 Not reported Not reported Not reported Not reported Not reported Not reported Not reported Not reported Not reported Not reported Not reported Not reported Not reported Not reported 1 **Reg Meas** Not reported Not reported Not reported Not reported Not reported Not reported Not reported Not reported UST TANKS TANKS 900330198 168694 Unregulated 4 Not reported Not reported Not reported Not reported Not reported Not reported Not reported Not reported Never Active 02/20/2013 Not reported Not reported Not reported Not reported Not reported Not reported Not reported Not reported Not reported Ν

Database(s)

EDR ID Number EPA ID Number

#### S102440859

#### **VEGA AUTO SERVICE (Continued)**

Individual/General:	1
Fee Code:	Not reported
Direction/Voice:	Passive
Enforcement Id(EID):	229282
Region:	4
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	Staff Enforcement Letter
Effective Date:	09/03/1999
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	09/03/1999
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 900330198
Description:	Level 1 enforcement letter sent 9/3/99 for FTS 2Q99
	groundwater monitoring report.
Program:	ŬST
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability \$ Amount:	0
Project \$ Amount:	0
Liability \$ Paid:	0
Project \$ Completed:	0
Total \$ Paid/Completed Amount:	0
HIST CORTESE:	

Region:	CORTESE
Facility County Code:	19
Reg By:	LTNKA
Reg Id:	900330198

# 48SUPER RECYCLINGNE530 N FICKETT ST

# 1/4-1/2 LOS ANGELES, CA 90033

SWRCY:

0.468 mi. 2473 ft.

# Relative:

Higher	Reg ld:	248362
•	Cert Id:	RC248362.001
Actual:	Mailing Address:	205 Vineyard Ave
359 ft.	Mailing City:	Duarte
	Mailing State:	CA
	Mailing Zip Code:	91010
	Website:	http://super-recycling.com
	Email:	Not reported
	Phone Number:	(626) 422-9771
	Grand Father:	Ν
	Rural:	Ν
	Operation Begin Date:	01/09/2017
	Aluminium:	Y
	Glass:	Y
	Plastic:	Y
	Bimetal:	Y

SWRCY S119777688 N/A

Map ID	
Direction	
Distance	
Elevation	Site

Database(s)

EDR ID Number **EPA ID Number** 

#### SUPER RECYCLING (Continued)

#### Agency:

Monday Hours Of Operation: Tuesday Hours Of Operation: Wednesday Hours Of Operation: Thursday Hours Of Operation: Friday Hours Of Operation: Saturday Hours Of Operation: Sunday Hours Of Operation: Organization ID: Organization Name:

N/A 8:00 am - 5:00 pm; Closed 12:00 pm - 1:00 pm 8:00 am - 5:00 pm; Closed 12:00 pm - 1:00 pm 8:00 am - 5:00 pm; Closed 12:00 pm - 1:00 pm 8:00 am - 5:00 pm; Closed 12:00 pm - 1:00 pm 8:00 am - 5:00 pm; Closed 12:00 pm - 1:00 pm 8:00 am - 5:00 pm; Closed 12:00 pm - 1:00 pm CLOSED 248362 Super Recycling

#### J49 SHELL #204-4534-2700

#### NNW **1900 CESAR CHAVEZ AVE E** LOS ANGELES, CA 90033 1/4-1/2

0.480 mi.

LUST:

2535 ft. Site 1 of 2 in cluster J

Relati

Relative:	
Higher	

Higher	Region:	STATE
-	Global Id:	T0603700836
Actual:	Latitude:	34.0499588
347 ft.	Longitude:	-118.2151751
	Case Type:	LUST Cleanup Site
	Status:	Completed - Case Closed
	Status Date:	01/22/2013
	Lead Agency:	LOS ANGELES RWQCB (REGION 4)
	Case Worker:	AT
	Local Agency:	LOS ANGELES, CITY OF
	RB Case Number:	900330170
	LOC Case Number:	Not reported
	File Location:	Regional Board
	Potential Media Affect:	Aquifer used for drinking water supply
	Potential Contaminants of Concern:	Gasoline
	Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

#### Con

Contact:	
Global Id:	T0603700836
Contact Type:	Regional Board Caseworker
Contact Name:	ARMAN TOUMARI
Organization Name:	LOS ANGELES RWQCB (REGION 4)
Address:	320 WEST 4TH STREET, SUITE 200
City:	LOS ANGELES
Email:	atoumari@waterboards.ca.gov
Phone Number:	2135766708
Global Id:	T0603700836
Contact Type:	Local Agency Caseworker
Contact Name:	ELOY LUNA
Organization Name:	LOS ANGELES, CITY OF
Address:	200 North Main Street, Suite 1780
City:	LOS ANGELES
Email:	eloy.luna@lacity.org
Phone Number:	Not reported
Status History:	

Global Id:

T0603700836

#### S119777688

#### LUST S103437975 N/A

TC4967023.2s Page 84

Database(s)

EDR ID Number EPA ID Number

#### SHELL #204-4534-2700 (Continued)

Status: Status Date:

Global Id: Status: Status Date:

Global Id: Status: Status Date:

Global Id: Status: Status Date:

Global Id: Status: Status Date:

Global Id: Status: Status Date:

Global Id: Status: Status Date:

Global Id: Status: Status Date:

Regulatory Activities: Global Id: Action Type: Date: Action:

> Global Id: Action Type: Date: Action:

Global Id: Action Type: Date: Action:

Global Id: Action Type: Date: Action:

Global Id: Action Type: Date: Action: Completed - Case Closed 01/22/2013

T0603700836 Open - Case Begin Date 08/01/1989

T0603700836 Open - Eligible for Closure 11/16/2012

T0603700836 Open - Remediation 09/05/1990

T0603700836 Open - Remediation 10/17/2002

T0603700836 Open - Site Assessment 08/10/1989

T0603700836 Open - Site Assessment 12/19/1989

T0603700836 Open - Site Assessment 02/04/1997

T0603700836 RESPONSE 07/15/2006 Monitoring Report - Quarterly

T0603700836 RESPONSE 04/15/2006 Monitoring Report - Quarterly

T0603700836 RESPONSE 04/15/2007 Monitoring Report - Quarterly

T0603700836 RESPONSE 07/05/2005 Interim Remedial Action Plan

T0603700836 RESPONSE 07/15/2009 Monitoring Report - Semi-Annually

Database(s)

EDR ID Number **EPA ID Number** 

#### SHELL #204-4534-2700 (Continued)

Date: Action:

Date:

Date: Action:

Date:

Date:

Date:

Date:

Date:

Date:

Date: Action:

Date:

Action:

Action:

Action:

Action:

Action:

Action:

Action:

Action:

Global Id: T0603700836 RESPONSE Action Type: 10/15/2008 Monitoring Report - Quarterly T0603700836 Global Id: RESPONSE Action Type: 10/15/2003 Monitoring Report - Quarterly T0603700836 Global Id: ENFORCEMENT Action Type: 06/15/2009 Staff Letter T0603700836 Global Id: RESPONSE Action Type: 10/15/2009 Monitoring Report - Semi-Annually Global Id: T0603700836 Action Type: RESPONSE 05/28/2009 Clean Up Fund - 5-Year Review Summary Global Id: T0603700836 Action Type: RESPONSE 07/15/2007 Monitoring Report - Quarterly Global Id: T0603700836 Action Type: RESPONSE 01/15/2008 Monitoring Report - Quarterly Global Id: T0603700836 Action Type: RESPONSE 07/15/2003 Monitoring Report - Quarterly T0603700836 Global Id: Action Type: RESPONSE 04/15/2009 Monitoring Report - Quarterly Global Id: T0603700836 Action Type: Other 08/01/1989 Leak Discovery T0603700836 Global Id: Action Type: RESPONSE 10/15/2004 Monitoring Report - Quarterly Global Id: T0603700836 Action Type: RESPONSE

Database(s)

EDR ID Number **EPA ID Number** 

#### SHELL #204-4534-2700 (Continued)

Date:

Date:

Date:

Date:

Date:

Date:

Date:

Date: Action:

Date:

Date:

Date:

Date:

Action:

Action:

Global Id:

Action:

Global Id:

Action:

Global Id:

Action:

Global Id:

Global Id:

Action:

lobal Id:

04/15/2004 Monitoring Report - Quarterly T0603700836 Action Type: RESPONSE 06/29/2010 Clean Up Fund - 5-Year Review Summary T0603700836 Action Type: RESPONSE 07/15/2008 Monitoring Report - Quarterly T0603700836 Action Type: RESPONSE 01/15/2009 Monitoring Report - Quarterly T0603700836 RESPONSE Action Type: 01/15/2004 Monitoring Report - Quarterly T0603700836 Action Type: RESPONSE 04/15/2010 Monitoring Report - Semi-Annually T0603700836 Action Type: RESPONSE 07/15/2005 Monitoring Report - Quarterly T0603700836 RESPONSE Action Type: 10/15/2005 Monitoring Report - Quarterly T0603700836 RESPONSE Action Type: 10/17/2002 Monitoring Report - Quarterly T0603700836 RESPONSE Action Type: 10/15/2010 Monitoring Report - Semi-Annually T0603700836 Action Type: ENFORCEMENT 07/19/2002 Site Visit / Inspection / Sampling T0603700836 Action Type: ENFORCEMENT 11/19/2012 Notification - Preclosure

Database(s)

EDR ID Number **EPA ID Number** 

#### SHELL #204-4534-2700 (Continued)

Global Id:	T0603700836
Action Type:	RESPONSE
Date:	04/15/2008
Action:	Monitoring Report - Quarterly
Global Id:	T0603700836
Action Type:	Other
Date:	04/12/1990
Action:	Leak Reported
Global Id:	T0603700836
Action Type:	RESPONSE
Date:	04/15/2011
Action:	Monitoring Report - Semi-Annually
Global Id:	T0603700836
Action Type:	RESPONSE
Date:	03/22/2013
Action:	Well Destruction Report
Global Id:	T0603700836
Action Type:	RESPONSE
Date:	10/15/2012
Action:	Monitoring Report - Semi-Annually
Global Id:	T0603700836
Action Type:	RESPONSE
Date:	01/21/2013
Action:	Correspondence
Global Id:	T0603700836
Action Type:	RESPONSE
Date:	10/15/2007
Action:	Monitoring Report - Quarterly
Global Id:	T0603700836
Action Type:	RESPONSE
Date:	08/22/2002
Action:	Other Report / Document
Global Id:	T0603700836
Action Type:	RESPONSE
Date:	01/15/2005
Action:	Monitoring Report - Quarterly
Global Id:	T0603700836
Action Type:	RESPONSE
Date:	08/09/2012
Action:	Clean Up Fund - 5-Year Review Summary
Global Id:	T0603700836
Action Type:	ENFORCEMENT
Date:	07/22/2002
Action:	Staff Letter
Global Id:	T0603700836
Action Type:	RESPONSE

Database(s)

EDR ID Number **EPA ID Number** 

#### SHELL #204-4534-2700 (Continued)

Date:	08/08/2011
Action:	Clean Up Fund - 5-Year Review Summary
Global Id:	T0603700836
Action Type:	RESPONSE
Date:	04/15/2012
Action:	Monitoring Report - Semi-Annually
Global Id:	T0603700836
Action Type:	RESPONSE
Date:	10/15/2006
Action:	Monitoring Report - Quarterly
Global Id:	T0603700836
Action Type:	RESPONSE
Date:	01/15/2007
Action:	Monitoring Report - Quarterly
Global Id:	T0603700836
Action Type:	RESPONSE
Date:	08/15/2012
Action:	Clean Up Fund - 5-Year Review Summary
Global Id:	T0603700836
Action Type:	ENFORCEMENT
Date:	01/22/2013
Action:	Closure/No Further Action Letter
Global Id:	T0603700836
Action Type:	RESPONSE
Date:	01/15/2006
Action:	Monitoring Report - Quarterly
Global Id:	T0603700836
Action Type:	RESPONSE
Date:	07/15/2004
Action:	Monitoring Report - Quarterly
Global Id:	T0603700836
Action Type:	RESPONSE
Date:	04/15/2005
Action:	Monitoring Report - Quarterly
Global Id:	T0603700836
Action Type:	REMEDIATION
Date:	09/01/1991
Action:	Soil Vapor Extraction (SVE)
Global Id:	T0603700836
Action Type:	REMEDIATION
Date:	11/01/2000
Action:	Excavation
Global Id:	T0603700836
Action Type:	REMEDIATION
Date:	12/01/2001
Action:	Free Product Removal
Database(s)

EDR ID Number EPA ID Number

### SHELL #204-4534-2700 (Continued)

LUST REG 4: Region: 4 04 Regional Board: County: Los Angeles Facility Id: 900330170 Remedial action (cleanup) Underway Status: Substance: Gasoline Substance Quantity: Not reported Local Case No: Not reported Case Type: Groundwater Abatement Method Used at the Site: Not reported Global ID: T0603700836 W Global ID: W0605100649 Staff: AT Local Agency: 19050 Cross Street: STATE ST Enforcement Type: LET Date Leak Discovered: 8/1/1989 Date Leak First Reported: 4/12/1990 Date Leak Record Entered: 4/18/1990 Date Confirmation Began: 8/10/1989 Date Leak Stopped: Not reported Date Case Last Changed on Database: 7/15/2002 Date the Case was Closed: Not reported How Leak Discovered: Not reported How Leak Stopped: Not reported Not reported Cause of Leak: Leak Source: Not reported Operator: FORMERLY BROOKLYN AVE Water System: DAVE GRIFFITH L A D W P Well Name: Not reported Approx. Dist To Production Well (ft): 9056.570541242278213549550936 Source of Cleanup Funding: Not reported Preliminary Site Assessment Workplan Submitted: Not reported Preliminary Site Assessment Began: 12/19/1989 Pollution Characterization Began: 12/1/2000 **Remediation Plan Submitted:** 9/5/1990 Remedial Action Underway: 10/17/2002 4/12/1990 Post Remedial Action Monitoring Began: Enforcement Action Date: Not reported Historical Max MTBE Date: 1/1/1965 Hist Max MTBE Conc in Groundwater: 753000 Hist Max MTBE Conc in Soil: 38 Significant Interim Remedial Action Taken: Not reported GW Qualifier: Not reported Soil Qualifier: Organization: Not reported Not reported **Owner Contact:** ED PADEN Responsible Party: **RP Address:** CARSON TERMINAL, P.O. BOX 6249 Program: LUST Lat/Long: 34.0499588 / -1 Local Agency Staff: PEJ Beneficial Use: Not reported Priority: Not reported Cleanup Fund Id: Not reported Suspended: Not reported

Map ID Direction	MAP FINDINGS			
Distance Elevation	Site		Database(s)	EDR ID Number EPA ID Number
	SHELL #204-4534-2700 (Continue Assigned Name: 26 Summary: N	e <b>d)</b> 500649-001GEN O GW W/IN 1 MILE.;  12/16/99 4TH QTR GW MON	I RPT 1999; 7/14/00 2N	<b>S103437975</b> ID QTR
	G 10	W MON RPT 2000; 9/18/00 WELL ABANDONMEN D/9/00 3RD QTR GW MON RPT; 1/13/01 4TH QTR	T & REINSTALLATION GW MON RPT 2000	I RPT;
J50 NNW 1/4-1/2 0.480 mi.	SHELL #204-4534-2700 1900 CESAR CHAVEZ BOYLE HEIGHTS, CA 90033		HIST CORTESE	S105022888 N/A
2535 ft.	Site 2 of 2 in cluster J			
Relative: Higher Actual: 347 ft.	HIST CORTESE: Region: Facility County Code: Reg By: Reg Id:	CORTESE 19 LTNKA 900330170		
51 West 1/4-1/2 0.499 mi. 2637 ft.	AL SAL OIL #25 1800 4TH ST. LOS ANGELES, CA 90033		LUST	S107472830 N/A
Relative: Lower	LUST: Region:	STATE		
Actual: 292 ft.	Latitude: Longitude: Case Type: Status: Status Date: Lead Agency: Case Worker: Local Agency: RB Case Number: LOC Case Number: File Location: Potential Media Affect: Potential Contaminants of Cor Site History: Click here to access the Califo Contact: Global Id: Contact Type: Contact Type: Contact Name: Organization Name: Address: City:	34.042796 -118.219277 LUST Cleanup Site Open - Site Assessment 07/19/2012 LOS ANGELES RWQCB (REGION 4) MT LOS ANGELES, CITY OF 900330407 1914 Not reported Under Investigation ncern: Gasoline Not reported wrnia GeoTracker records for this facility: T0603783818 Local Agency Caseworker ELOY LUNA LOS ANGELES, CITY OF 200 North Main Street, Suite 1780 LOS ANGELES clavelume @Lasity.com		
	Email: Phone Number: Global Id: Contact Type: Contact Name: Organization Name:	eloy.luna@lacity.org Not reported T0603783818 Regional Board Caseworker MARYAM TAIDY LOS ANGELES RWQCB (REGION 4)		

Database(s)

EDR ID Number EPA ID Number

S107472830

### AL SAL OIL #25 (Continued)

Address: City: Email: Phone Number:

Status History: Global Id: Status: Status Date:

> Global Id: Status: Status Date:

Global Id: Status: Status Date:

Global Id: Status: Status Date:

Global Id: Status: Status Date:

Regulatory Activities: Global Id: Action Type: Date: Action:

> Global Id: Action Type: Date: Action:

> Global Id: Action Type: Date: Action:

> Global Id: Action Type: Date: Action:

Global Id: Action Type: Date: Action:

Global Id: Action Type: Date: Action: 320 W. 4TH ST., SUITE 200 LOS ANGELES mtaidy@waterboards.ca.gov 2135766741

T0603783818 Open - Case Begin Date 03/11/1998

T0603783818 Open - Site Assessment 01/28/1999

T0603783818 Open - Site Assessment 06/08/2006

T0603783818 Open - Site Assessment 05/11/2009

T0603783818 Open - Site Assessment 07/19/2012

T0603783818 RESPONSE 01/15/2009 Monitoring Report - Quarterly

T0603783818 RESPONSE 07/15/2015 Monitoring Report - Semi-Annually

T0603783818 RESPONSE 07/15/2009 Monitoring Report - Semi-Annually

T0603783818 RESPONSE 04/15/2008 Monitoring Report - Quarterly

T0603783818 RESPONSE 01/15/2011 Monitoring Report - Semi-Annually

T0603783818 RESPONSE 01/15/2015 Monitoring Report - Semi-Annually

Database(s)

EDR ID Number EPA ID Number

### AL SAL O

AL OIL #25 (Continued)	
Global Id:	T0603783818
Action Type:	RESPONSE
Date:	10/30/2015
Action:	CAP/RAP - Other Report
Global Id:	T0603783818
Action Type:	ENFORCEMENT
Date:	06/04/2015
Action:	Health and Safety Code Section 25296.10(c)
Global Id:	T0603783818
Action Type:	RESPONSE
Date:	03/14/2008
Action:	Soil and Water Investigation Workplan
Global Id:	T0603783818
Action Type:	RESPONSE
Date:	01/15/2008
Action:	Monitoring Report - Quarterly
Global Id:	T0603783818
Action Type:	RESPONSE
Date:	07/15/2008
Action:	Monitoring Report - Quarterly
Global Id:	T0603783818
Action Type:	RESPONSE
Date:	10/15/2007
Action:	Monitoring Report - Quarterly
Global Id:	T0603783818
Action Type:	RESPONSE
Date:	01/15/2016
Action:	Monitoring Report - Semi-Annually
Global Id:	T0603783818
Action Type:	Other
Date:	03/11/1998
Action:	Leak Discovery
Global Id:	T0603783818
Action Type:	RESPONSE
Date:	12/29/2005
Action:	Other Report / Document
Global Id:	T0603783818
Action Type:	RESPONSE
Date:	08/17/2011
Action:	Well Installation Workplan
Global Id:	T0603783818
Action Type:	RESPONSE
Date:	01/15/2012
Action:	Monitoring Report - Semi-Annually
Global Id:	T0603783818
Action Type:	RESPONSE

Database(s)

EDR ID Number **EPA ID Number** 

#### AL SAL OIL #25 (Continued)

Date:

Date:

Date:

Date:

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Date:

Date:

Date:

Date:

Date:

Date:

Date:

10/01/2015 Clean Up Fund - 5-Year Review Summary Action: Global Id: T0603783818 Action Type: RESPONSE 02/28/2017 Action: Well Destruction Report Global Id: T0603783818 Action Type: RESPONSE 07/15/2016 Action: Monitoring Report - Semi-Annually Global Id: T0603783818 ENFORCEMENT Action Type: 11/29/2005 Action: Staff Letter Global Id: T0603783818 Action Type: ENFORCEMENT 09/13/2016 Notification - Preclosure Action: Global Id: T0603783818 Action Type: RESPONSE 07/15/2011 Action: Monitoring Report - Semi-Annually T0603783818 Global Id: Action Type: RESPONSE 11/19/2012 Action: Soil and Water Investigation Report Global Id: T0603783818 ENFORCEMENT Action Type: 10/09/2015 Action: Staff Letter T0603783818 Global Id: Action Type: RESPONSE 10/15/2008 Action: Monitoring Report - Quarterly Global Id: T0603783818 RESPONSE Action Type: 01/15/2013 Action: Monitoring Report - Semi-Annually T0603783818 Global Id: Action Type: ENFORCEMENT 08/07/2015 Action: Staff Letter Global Id: T0603783818 Action Type: ENFORCEMENT 06/15/2009 Action: Staff Letter

Database(s)

EDR ID Number **EPA ID Number** 

#### AL SAL OIL #25 (Continued)

Date:

Date:

Date: Action:

Date:

Date: Action:

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Date: Action:

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Action:

Global Id: T0603783818 RESPONSE Action Type: 07/15/2013 Monitoring Report - Semi-Annually Global Id: T0603783818 ENFORCEMENT Action Type: 07/19/2012 Staff Letter T0603783818 Global Id: Action Type: Other 01/28/1999 Leak Reported T0603783818 Global Id: RESPONSE Action Type: 04/26/2011 Clean Up Fund - 5-Year Review Summary Global Id: T0603783818 RESPONSE Action Type: 01/15/2014 Monitoring Report - Semi-Annually T0603783818 Global Id: Action Type: RESPONSE 03/11/2015 Request for Closure - Regulator Responded Global Id: T0603783818 Action Type: RESPONSE 03/11/2015 Request for Closure - Regulator Responded Global Id: T0603783818 Action Type: RESPONSE 07/23/2015 Other Workplan - Regulator Responded T0603783818 Global Id: Action Type: RESPONSE 11/20/2007 Well Installation Report Global Id: T0603783818 Action Type: RESPONSE 07/15/2014 Monitoring Report - Semi-Annually T0603783818 Global Id: Action Type: RESPONSE 07/20/2016 Request for Closure - Regulator Responded Global Id: T0603783818 Action Type: REMEDIATION

Map ID Direction		MAP FINDINGS		
Distance Elevation	Site		Database(s)	EDR ID Number EPA ID Number
	AL SAL OIL #25 (Continued	a)		S107472830
	Date: Action:	08/01/2015 Other (Use Description Field)		
52 NNW 1/2-1 0.629 mi. 3321 ft.	MANUAL ARTS NEW ELEM 700 STATE STREET LOS ANGELES, CA 90007	ENTARY SCHOOL NO. 1	ENVIROSTOR SCH	S105754241 N/A
Relative: Higher	ENVIROSTOR: Facility ID:	19840001		
Actual: 348 ft.	Status: Status Date: Site Code: Site Type: Site Type Detailed: Acres: NPL: Regulatory Agencies: Lead Agency: Program Manager: Supervisor: Division Branch: Assembly: Senate: Special Program: Restricted Use: Site Mgmt Req: Funding: Latitude: Longitude: APN: Past Use: Potential COC:	No Further Action 05/19/2000 304002 School Investigation School 7.1 NO SMBRP Shahir Haddad Thomas Cota Southern California Schools & Brownfields Outreach 59 30 Not reported NO NONE SPECIFIED School District 34.01683 -118.2862 5037028905 * MUSEUMS, BOTANICAL, ZOOLOGICAL GARDENS Naturally Occurring Asbestos (NOA Benzene Lead TPH TPH-MOTOR OIL 30024-NO 30025-NO 40002-NO 30003-NO 30013-NO	H-diesel TPH-gas 3002502-NO	
	Potential Description: Alias Name: Alias Type: Alias Name: Alias Type: Alias Name: Alias Type: Alias Name: Alias Type: Alias Name: Alias Type: Alias Name: Alias Type: Alias Name:	SOIL LOS ANGELES UNIFIED SCHOOL DISTRICT Alternate Name MANUAL ARTS ELEMENTARY Alternate Name MANUAL ARTS ELEMENTARY SCHOOL #1 Alternate Name MANUAL ARTS NEW ELEMENTARY SCHOOL # Alternate Name 5037028905 APN 304002 Project Code (Site Code) 19840001	1	
	Alias Type: Completed Info: Completed Area Name: Completed Sub Area Na Completed Document T Completed Date:	PROJECT WIDE ame: Not reported ype: Preliminary Endangerment Assessment Report 05/19/2000		

Database(s) El

EDR ID Number EPA ID Number

MAN	MANUAL ARTS NEW ELEMENTARY SCHOOL NO. 1 (Continued)			
	Comments:	Not reported		
	Completed Area Name:	PROJECT WIDE		
	Completed Sub Area Name:	Not reported		
	Completed Document Type:	Environmental Oversight Agreement		
	Completed Date:	02/10/2000		
	Comments:	Not reported		
	Completed Area Name:	PROJECT WIDE		
	Completed Sub Area Name:	Not reported		
	Completed Document Type:	Cost Recovery Closeout Memo		
	Completed Date:	03/22/2001		
	Comments:	CRU Memo completed.		
	Future Area Name:	Not reported		
	Future Sub Area Name:	Not reported		
	Future Document Type:	Not reported		
	Future Due Date:	Not reported		
	Schedule Area Name:	Not reported		
	Schedule Sub Area Name:	Not reported		
	Schedule Document Type:	Not reported		
	Schedule Due Date:	Not reported		
	Schedule Revised Date:	Not reported		
S	CH:			
	Facility ID:	19840001		
	Site Type:	School Investigation		
	Site Type Detail:	School		
	Site Mgmt. Req.:	NONE SPECIFIED		
	Acres:	7.1		
	National Priorities List:	NO		
	Cleanup Oversight Agencies:	SMBRP		
	Lead Agency:	SMBRP		
	Lead Agency Description:	DTSC - Site Cleanup Program		
	Project Manager:	Shahir Haddad		
	Supervisor:	I nomas Cota Southorn Colifornia Schoola & Brownfielda Outrooch		
	Site Code:			
	Assombly:	504002		
	Senate:	30		
	Special Program Status:	Not reported		
	Status:	No Further Action		
	Status Date:	05/19/2000		
	Restricted Use:	NO		
	Funding:	School District		
	Latitude:	34.01683		
	Longitude:	-118.2862		
	APN:	5037028905		
	Past Use:	* MUSEUMS, BOTANICAL, ZOOLOGICAL GARDENS		
	Potential COC:	Naturally Occurring Asbestos (NOA, Benzene, Lead, TPH-diesel,		
		1711-Yas, 177-1110107 VIL 30024.NO 30025.NO 40002.NO 30003.NO 30013.NO 3002502 NO		
	Potential Description	SUCZET 140, SUCZETIAO, HOUCETIAO, SUCCETIAO, SUCTETIAO, SUCZETIAO, SUCZETIAO, SUCCETIAO, SUCCE		
	Alias Name			
	Alias Type	Alternate Name		
	Alias Name:	MANUAL ARTS ELEMENTARY		

Map ID Direction Distance Elevation Site

### Database(s) EPA I

EDR ID Number EPA ID Number

ANUAL ARTS NEW ELEMENTARY SCHOOL NO. 1 (Continued)			
Alias Type:	Alternate Name		
Alias Name:	MANUAL ARTS ELEMENTARY SCHOOL #1		
Alias Type:	Alternate Name		
Alias Name:	MANUAL ARTS NEW ELEMENTARY SCHOOL #1		
Alias Name:	Alternate Name		
Alias Name:	5037028905		
Alias Type:	APN		
Alias Type:	304002		
Alias Name:	Project Code (Site Code)		
Alias Name:	19840001		
Alias Type:	Envirostor ID Number		
Completed Info: Completed Area Name: Completed Sub Area Name: Completed Document Type: Completed Date: Comments:	PROJECT WIDE Not reported Preliminary Endangerment Assessment Report 05/19/2000 Not reported		
Completed Area Name:	PROJECT WIDE		
Completed Sub Area Name:	Not reported		
Completed Document Type:	Environmental Oversight Agreement		
Completed Date:	02/10/2000		
Comments:	Not reported		
Completed Area Name:	PROJECT WIDE		
Completed Sub Area Name:	Not reported		
Completed Document Type:	Cost Recovery Closeout Memo		
Completed Date:	03/22/2001		
Comments:	CRU Memo completed.		
Future Area Name:	Not reported		
Future Sub Area Name:	Not reported		
Future Document Type:	Not reported		
Future Due Date:	Not reported		
Schedule Area Name:	Not reported		
Schedule Sub Area Name:	Not reported		
Schedule Document Type:	Not reported		
Schedule Due Date:	Not reported		
Schedule Revised Date:	Not reported		
OTO STREET 010 SOTO STREET OS ANGELES, CA 90023			

S105754241

53 SSW

1/2-1

Relative:	ENVIROSTOR:	
Lower	Facility ID:	1900004
	Status:	Inactive - Action Required
Actual:	Status Date:	05/30/2000
298 ft.	Site Code:	304173
	Site Type:	School Investigation
	Site Type Detailed:	School
	Acres:	4.35
	NPL:	NO
	Regulatory Agencies:	SMBRP
	Lead Agency:	SMBRP

ENVIROSTOR S103620300 SCH N/A

Database(s)

EDR ID Number EPA ID Number

### SOTO STREET (Continued)

Program Manager: Supervisor: Division Branch: Assembly: Senate: Special Program: Restricted Use: Site Mgmt Req: Funding: Latitude: Longitude: APN: Past Use: Potential COC: Confirmed COC: Potential Description: Alias Name: Alias Type: Alias Name: Alias Type: Alias Name: Alias Type: Alias Name: Alias Type: Alias Name: Alias Type:	ot reported vier Hinojosa puthern California Scho of reported DNE SPECIFIED chool District .0319 18.2161 DNE SPECIFIED JNKNOWN, NURSERY senic Chlordane DDD I 001-NO 30004-NO 300 DIL LA USD-SOTO ST.S Alternate Name SOTO STREET SCI Alternate Name 304173 Project Code (Site C 1900004	ols & Brownfields Outreach DDE DDT 006-NO 30007-NO 30008-NO SCHOOL/CDE HOOL (PROPOSED) code)
Alido Type.		
Completed Info: Completed Area Name: Completed Sub Area Nar Completed Document Ty Completed Date: Comments: Completed Area Name: Completed Sub Area Nar Completed Document Ty	PROJECT WIDE Not reported Phase 1 05/30/2000 Not reported PROJECT WIDE Not reported Environmental Over	sight Agreement
Completed Date:	02/10/2000	
Comments:	Not reported	
Future Area Name: Future Sub Area Name: Future Document Type: Future Due Date: Schedule Area Name: Schedule Sub Area Nam Schedule Document Typ Schedule Due Date: Schedule Revised Date:	Not reported Not reported Not reported Not reported Not reported Not reported Not reported Not reported	
SCH:		
Facility ID: Site Type: Site Type Detail: Site Mgmt. Req.: Acres: National Priorities List:	19000004 School Investigation School NONE SPECIFIED 4.35 NO	

Cleanup Oversight Agencies: SMBRP

Database(s)

EDR ID Number EPA ID Number

### SOTO STREET (Continued)

(,	
Lead Agency: Lead Agency Description: Project Manager: Supervisor: Division Branch: Site Code: Assembly: Senate: Special Program Status: Status: Status Date: Restricted Use: Funding: Latitude: Longitude: APN: Past Use: Potential COC: Confirmed COC: Potential Description: Alias Name: Alias Type: Alias Name: Alias Type: Alias Name: Alias Type: Alias Name:	SMBRP DTSC - Site Cleanup Program Not reported Javier Hinojosa Southern California Schools & Brownfields Outreach 304173 53 24 Not reported Inactive - Action Required 05/30/2000 NO School District 34.0319 -118.2161 NONE SPECIFIED * UNKNOWN, NURSERY Arsenic, Chlordane, DDD, DDE, DDT 30001-NO, 30004-NO, 30006-NO, 30007-NO, 30008-NO SOIL LA USD-SOTO ST.SCHOOL/CDE Alternate Name SOTO STREET SCHOOL (PROPOSED) Alternate Name 304173 Project Code (Site Code)
Alias Type: Completed Info: Completed Area Name: Completed Sub Area Name: Completed Document Type: Completed Date: Comments:	Envirostor ID Number PROJECT WIDE Not reported Phase 1 05/30/2000 Not reported
Completed Area Name: Completed Sub Area Name: Completed Document Type: Completed Date: Comments:	PROJECT WIDE Not reported Environmental Oversight Agreement 02/10/2000 Not reported
Future Area Name: Future Sub Area Name: Future Document Type: Future Due Date: Schedule Area Name: Schedule Sub Area Name: Schedule Document Type: Schedule Due Date: Schedule Revised Date:	Not reported Not reported Not reported Not reported Not reported Not reported Not reported Not reported Not reported Not reported

Database(s)

EDR ID Number EPA ID Number

54 South 1/2-1 0.945 mi. 4991 ft.	CENTRAL REGION MIDDLE S 2821 EAST 7TH STREET LOS ANGELES, CA 90023	SCHOOL #9, SITE 26	ENVIROSTOR SCH	S108484726 N/A
1/2-1 0.945 mi. 4991 ft. Relative: Higher Actual: 306 ft.	ENVIROSTOR: Facility ID: Status: Status Date: Site Code: Site Type: Site Type Detailed: Acres: NPL: Regulatory Agencies: Lead Agency: Program Manager: Supervisor: Division Branch: Assembly: Senate: Special Program: Restricted Use: Site Mgmt Req: Funding: Latitude: Longitude: APN: Past Use: Potential COC: Confirmed COC: Potential Description: Alias Name: Alias Type: Alias Type: Alias Type: Completed Info: Completed Area Name: Completed Document Ty Completed Date: Completed Date: Completed Date: Completed Date: Completed Date: Completed Area Name: Future Area Name: Future Sub Area Name: Future Sub Area Name: Future Due Date: Schedule Sub Area Name: Schedule Document Type: Future Due Date: Schedule Document Type: Future Due Date: Future D	60000584 Inactive - Needs Evaluation 01/29/2008 304560 School Investigation School 7.75 NO SMBRP SMBRP Not reported Javier Hinojosa Southern California Schools & Brownfields Outreach 53 24 Not reported NO NONE SPECIFIED School District 34.02989 -118.2094 NONE SPECIFIED School District 34.02989 -118.2094 NONE SPECIFIED MACHINE SHOP, MAINTENANCE / CLEANING, NURSERY SCHOOL - HIGH SCHOOL Under Investigation 31001-NO SOIL, SV 304560 Project Code (Site Code) 60000584 Envirostor ID Number PROJECT WIDE ne: Not reported pe: Cost Recovery Closeout Memo 09/18/2012 Not reported Not reported	, SCHOOL - ELEN	ΛΕΝΤΑRY,
	Schedule Due Date: Schedule Revised Date:	Not reported Not reported		

### SCH:

Facility ID:

60000584

Database(s)

EDR ID Number EPA ID Number

CEN	TRAL REGION MIDDLE SCHO	DOL #9, SITE 26 (Continued)	S108484726
	Site Type:	School Investigation	
	Site Type Detail:	School	
	Site Mgmt. Req.:	NONE SPECIFIED	
	Acres:	7.75	
	National Priorities List:	NO	
	Cleanup Oversight Agencies:	SMBRP	
	Lead Agency:	SMBRP	
	Lead Agency Description:	DTSC - Site Cleanup Program	
	Project Manager:	Not reported	
	Supervisor:	Javier Hinojosa	
	Division Branch:	Southern California Schools & Brownfields Outreach	
	Site Code:	304560	
	Assembly:	53	
	Senate:	24	
	Special Program Status:	Not reported	
	Status:	Inactive - Needs Evaluation	
	Status Date:	01/29/2008	
	Restricted Use:	NO	
	Funding:	School District	
	Latitude:	34.02989	
	Longitude:	-118.2094	
	APN:	NONE SPECIFIED	
	Past Use:	MACHINE SHOP, MAINTENANCE / CLEANING, NURSERY, SCHOOL - E	ELEMENTARY,
		SCHOOL - HIGH SCHOOL	
	Potential COC:	Under Investigation	
	Confirmed COC:	31001-NO	
	Potential Description:	SOIL, SV	
	Alias Name:	304560	
	Alias Type:	Project Code (Site Code)	
	Alias Name:	60000584	
	Allas Type:	Envirostor ID Number	
C	ompleted Info:		
	Completed Area Name:	PROJECT WIDE	
	Completed Sub Area Name:	Not reported	
	Completed Document Type:	Cost Recovery Closeout Memo	
	Completed Date:	09/18/2012	
	Comments:	Not reported	
	Future Area Name:	Not reported	
	Future Sub Area Name:	Not reported	
	Future Document Type:	Not reported	
	Future Due Date:	Not reported	
	Schedule Area Name:	Not reported	
	Schedule Sub Area Name:	Not reported	
	Schedule Document Type:	Not reported	
	Schedule Due Date:	Not reported	
	Schedule Revised Date:	NOT REPORTED	

Count: 2 records.

#### ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
LOS ANGELES	S105628628	DENA NEW PRIMARY CENTER	HOSTETTER STREET/ORME AVENUE	90023	ENVIROSTOR, SCH
LOS ANGELES	S107770251	CENTRAL REGION HIGH SCHOOL #15	MARENGO STREET / CHICAGO STREE	90033	ENVIROSTOR, SCH

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

**Number of Days to Update:** Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

### STANDARD ENVIRONMENTAL RECORDS

### Federal NPL site list

#### NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 04/05/2017 Date Data Arrived at EDR: 04/21/2017 Date Made Active in Reports: 05/12/2017 Number of Days to Update: 21 Source: EPA Telephone: N/A Last EDR Contact: 06/08/2017 Next Scheduled EDR Contact: 07/17/2017 Data Release Frequency: Quarterly

**NPL Site Boundaries** 

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC) Telephone: 202-564-7333

EPA Region 1 Telephone 617-918-1143

EPA Region 3 Telephone 215-814-5418

EPA Region 4 Telephone 404-562-8033

EPA Region 5 Telephone 312-886-6686

EPA Region 10 Telephone 206-553-8665

### Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

EPA Region 6

EPA Region 7

EPA Region 8

**EPA Region 9** 

Telephone: 214-655-6659

Telephone: 913-551-7247

Telephone: 303-312-6774

Telephone: 415-947-4246

Date of Government Version: 04/05/2017 Date Data Arrived at EDR: 04/21/2017 Date Made Active in Reports: 05/12/2017 Number of Days to Update: 21

Source: EPA Telephone: N/A Last EDR Contact: 06/09/2017 Next Scheduled EDR Contact: 07/17/2017 Data Release Frequency: Quarterly

### NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991 Date Data Arrived at EDR: 02/02/1994 Date Made Active in Reports: 03/30/1994 Number of Days to Update: 56 Source: EPA Telephone: 202-564-4267 Last EDR Contact: 08/15/2011 Next Scheduled EDR Contact: 11/28/2011 Data Release Frequency: No Update Planned

### Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 04/05/2017 Date Data Arrived at EDR: 04/21/2017 Date Made Active in Reports: 05/12/2017 Number of Days to Update: 21 Source: EPA Telephone: N/A Last EDR Contact: 06/09/2017 Next Scheduled EDR Contact: 07/17/2017 Data Release Frequency: Quarterly

### Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 11/07/2016	Source: Environmental Protection Agency
Date Data Arrived at EDR: 01/05/2017	Telephone: 703-603-8704
Date Made Active in Reports: 04/07/2017	Last EDR Contact: 04/07/2017
Number of Days to Update: 92	Next Scheduled EDR Contact: 07/17/2017
	Data Release Frequency: Varies

### SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 02/07/2017 Date Data Arrived at EDR: 04/19/2017 Date Made Active in Reports: 05/05/2017 Number of Days to Update: 16 Source: EPA Telephone: 800-424-9346 Last EDR Contact: 06/08/2017 Next Scheduled EDR Contact: 07/31/2017 Data Release Frequency: Quarterly

### Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 02/07/2017 Date Data Arrived at EDR: 04/19/2017 Date Made Active in Reports: 05/05/2017 Number of Days to Update: 16

Source: EPA Telephone: 800-424-9346 Last EDR Contact: 06/08/2017 Next Scheduled EDR Contact: 07/31/2017 Data Release Frequency: Quarterly

### Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/12/2016	Source: EPA
Date Data Arrived at EDR: 12/28/2016	Telephone: 800-424-9346
Date Made Active in Reports: 02/10/2017	Last EDR Contact: 05/02/2017
Number of Days to Update: 44	Next Scheduled EDR Contact: 04/10/2017
	Data Release Frequency: Quarterly

### Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 12/12/2016 Date Data Arrived at EDR: 12/28/2016 Date Made Active in Reports: 02/10/2017 Number of Days to Update: 44

Source: Environmental Protection Agency Telephone: (415) 495-8895 Last EDR Contact: 05/02/2017 Next Scheduled EDR Contact: 04/10/2017 Data Release Frequency: Quarterly

### Federal RCRA generators list

### RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/12/2016 Date Data Arrived at EDR: 12/28/2016 Date Made Active in Reports: 02/10/2017 Number of Days to Update: 44

Source: Environmental Protection Agency Telephone: (415) 495-8895 Last EDR Contact: 05/02/2017 Next Scheduled EDR Contact: 04/10/2017 Data Release Frequency: Quarterly

### RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 12/12/2016 Date Data Arrived at EDR: 12/28/2016 Date Made Active in Reports: 02/10/2017 Number of Days to Update: 44 Source: Environmental Protection Agency Telephone: (415) 495-8895 Last EDR Contact: 05/02/2017 Next Scheduled EDR Contact: 04/10/2017 Data Release Frequency: Quarterly

### RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/12/2016SDate Data Arrived at EDR: 12/28/2016DDate Made Active in Reports: 02/10/2017Number of Days to Update: 44

Source: Environmental Protection Agency Telephone: (415) 495-8895 Last EDR Contact: 05/02/2017 Next Scheduled EDR Contact: 04/10/2017 Data Release Frequency: Varies

### Federal institutional controls / engineering controls registries

#### LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 12/28/2016	Source: Department of the Navy
Date Data Arrived at EDR: 01/04/2017	Telephone: 843-820-7326
Date Made Active in Reports: 04/07/2017	Last EDR Contact: 05/15/2017
Number of Days to Update: 93	Next Scheduled EDR Contact: 08/28/2017
	Data Release Frequency: Varies

### US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 02/13/2017	Source: Environmental Protection Agency
Date Data Arrived at EDR: 02/28/2017	Telephone: 703-603-0695
Date Made Active in Reports: 06/09/2017	Last EDR Contact: 05/31/2017
Number of Days to Update: 101	Next Scheduled EDR Contact: 09/11/2017
	Data Release Frequency: Varies

### US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 02/13/2017 Date Data Arrived at EDR: 02/28/2017 Date Made Active in Reports: 06/09/2017 Number of Days to Update: 101 Source: Environmental Protection Agency Telephone: 703-603-0695 Last EDR Contact: 05/31/2017 Next Scheduled EDR Contact: 09/11/2017 Data Release Frequency: Varies

### Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 09/26/2016 Date Data Arrived at EDR: 09/29/2016 Date Made Active in Reports: 11/11/2016 Number of Days to Update: 43 Source: National Response Center, United States Coast Guard Telephone: 202-267-2180 Last EDR Contact: 03/29/2017 Next Scheduled EDR Contact: 07/10/2017 Data Release Frequency: Annually

### State- and tribal - equivalent NPL

### **RESPONSE:** State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 01/30/2017	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 01/31/2017	Telephone: 916-323-3400
Date Made Active in Reports: 05/23/2017	Last EDR Contact: 05/02/2017
Number of Days to Update: 112	Next Scheduled EDR Contact: 08/14/2017
	Data Release Frequency: Quarterly

### State- and tribal - equivalent CERCLIS

### ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 01/30/2017 Date Data Arrived at EDR: 01/31/2017 Date Made Active in Reports: 05/23/2017 Number of Days to Update: 112 Source: Department of Toxic Substances Control Telephone: 916-323-3400 Last EDR Contact: 05/02/2017 Next Scheduled EDR Contact: 08/14/2017 Data Release Frequency: Quarterly

### State and tribal landfill and/or solid waste disposal site lists

#### SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inventory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 02/13/2017 Date Data Arrived at EDR: 02/15/2017 Date Made Active in Reports: 05/02/2017 Number of Days to Update: 76 Source: Department of Resources Recycling and Recovery Telephone: 916-341-6320 Last EDR Contact: 05/17/2017 Next Scheduled EDR Contact: 08/28/2017 Data Release Frequency: Quarterly

### State and tribal leaking storage tank lists

LUST: Leaking Underground Fuel Tank Report (GEOTRACKER) Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.		
Date of Government Version: 03/13/2017 Date Data Arrived at EDR: 03/14/2017 Date Made Active in Reports: 05/02/2017 Number of Days to Update: 49	Source: State Water Resources Control Board Telephone: see region list Last EDR Contact: 03/14/2017 Next Scheduled EDR Contact: 06/26/2017 Data Release Frequency: Quarterly	
LUST REG 6V: Leaking Underground Storage Tanl Leaking Underground Storage Tank locations.	k Case Listing . Inyo, Kern, Los Angeles, Mono, San Bernardino counties.	
Date of Government Version: 06/07/2005 Date Data Arrived at EDR: 06/07/2005 Date Made Active in Reports: 06/29/2005 Number of Days to Update: 22	Source: California Regional Water Quality Control Board Victorville Branch Office (6) Telephone: 760-241-7365 Last EDR Contact: 09/12/2011 Next Scheduled EDR Contact: 12/26/2011 Data Release Frequency: No Update Planned	
LUST REG 4: Underground Storage Tank Leak List Los Angeles, Ventura counties. For more curre Board's LUST database.	t ent information, please refer to the State Water Resources Control	
Date of Government Version: 09/07/2004 Date Data Arrived at EDR: 09/07/2004 Date Made Active in Reports: 10/12/2004 Number of Days to Update: 35	Source: California Regional Water Quality Control Board Los Angeles Region (4) Telephone: 213-576-6710 Last EDR Contact: 09/06/2011 Next Scheduled EDR Contact: 12/19/2011 Data Release Frequency: No Update Planned	
LUST REG 3: Leaking Underground Storage Tank Leaking Underground Storage Tank locations.	Database . Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.	
Date of Government Version: 05/19/2003 Date Data Arrived at EDR: 05/19/2003 Date Made Active in Reports: 06/02/2003 Number of Days to Update: 14	Source: California Regional Water Quality Control Board Central Coast Region (3) Telephone: 805-542-4786 Last EDR Contact: 07/18/2011 Next Scheduled EDR Contact: 10/31/2011 Data Release Frequency: No Update Planned	
LUST REG 2: Fuel Leak List Leaking Underground Storage Tank locations. Clara, Solano, Sonoma counties.	. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa	
Date of Government Version: 09/30/2004 Date Data Arrived at EDR: 10/20/2004 Date Made Active in Reports: 11/19/2004 Number of Days to Update: 30	Source: California Regional Water Quality Control Board San Francisco Bay Region (2) Telephone: 510-622-2433 Last EDR Contact: 09/19/2011 Next Scheduled EDR Contact: 01/02/2012 Data Release Frequency: Quarterly	
LUST REG 1: Active Toxic Site Investigation Del Norte, Humboldt, Lake, Mendocino, Modo please refer to the State Water Resources Cor	c, Siskiyou, Sonoma, Trinity counties. For more current information, ntrol Board's LUST database.	
Date of Government Version: 02/01/2001 Date Data Arrived at EDR: 02/28/2001 Date Made Active in Reports: 03/29/2001 Number of Days to Update: 29	Source: California Regional Water Quality Control Board North Coast (1) Telephone: 707-570-3769 Last EDR Contact: 08/01/2011 Next Scheduled EDR Contact: 11/14/2011 Data Release Frequency: No Update Planned	

LUST REG 6L: Leaking Underground Storage Tank Case Listing

For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003	
Date Data Arrived at EDR: 09/10/2003	
Date Made Active in Reports: 10/07/2003	
Number of Days to Update: 27	

Source: California Regional Water Quality Control Board Lahontan Region (6) Telephone: 530-542-5572 Last EDR Contact: 09/12/2011 Next Scheduled EDR Contact: 12/26/2011 Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

LUST REG 7: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004	Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Date Data Arrived at EDR: 02/26/2004	Telephone: 760-776-8943
Date Made Active in Reports: 03/24/2004	Last EDR Contact: 08/01/2011
Number of Days to Update: 27	Next Scheduled EDR Contact: 11/14/2011
	Data Release Frequency: No Update Planned

### LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005	Source: California Regional Water Quality Control Board Santa Ana Region (8)
Date Data Arrived at EDR: 02/15/2005	Telephone: 909-782-4496
Date Made Active in Reports: 03/28/2005	Last EDR Contact: 08/15/2011
Number of Days to Update: 41	Next Scheduled EDR Contact: 11/28/2011
	Data Release Frequency: Varies

LUST REG 9: Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001 Date Data Arrived at EDR: 04/23/2001 Date Made Active in Reports: 05/21/2001 Number of Days to Update: 28 Source: California Regional Water Quality Control Board San Diego Region (9) Telephone: 858-637-5595 Last EDR Contact: 09/26/2011 Next Scheduled EDR Contact: 01/09/2012 Data Release Frequency: No Update Planned

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 11/14/2016	Source: EPA Region 1
Date Data Arrived at EDR: 01/26/2017	Telephone: 617-918-1313
Date Made Active in Reports: 05/05/2017	Last EDR Contact: 04/28/2017
Number of Days to Update: 99	Next Scheduled EDR Contact: 08/07/2017
	Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 10/14/2016	Source: EPA Region 4
Date Data Arrived at EDR: 01/27/2017	Telephone: 404-562-8677
Date Made Active in Reports: 05/05/2017	Last EDR Contact: 04/28/2017
Number of Days to Update: 98	Next Scheduled EDR Contact: 08/07/2017
, , , , , , , , , , , , , , , , , , ,	Data Release Frequency: Semi-Annually

INDIAN LUST R10: Leaking Underground Storage LUSTs on Indian land in Alaska, Idaho, Orego	Tanks on Indian Land on and Washington.
Date of Government Version: 10/07/2016 Date Data Arrived at EDR: 01/26/2017 Date Made Active in Reports: 05/05/2017 Number of Days to Update: 99	Source: EPA Region 10 Telephone: 206-553-2857 Last EDR Contact: 04/28/2017 Next Scheduled EDR Contact: 08/07/2017 Data Release Frequency: Quarterly
INDIAN LUST R9: Leaking Underground Storage LUSTs on Indian land in Arizona, California, N	Tanks on Indian Land New Mexico and Nevada
Date of Government Version: 10/06/2016 Date Data Arrived at EDR: 01/26/2017 Date Made Active in Reports: 05/05/2017 Number of Days to Update: 99	Source: Environmental Protection Agency Telephone: 415-972-3372 Last EDR Contact: 04/28/2017 Next Scheduled EDR Contact: 08/07/2017 Data Release Frequency: Quarterly
INDIAN LUST R6: Leaking Underground Storage LUSTs on Indian land in New Mexico and Ok	Tanks on Indian Land lahoma.
Date of Government Version: 10/01/2016 Date Data Arrived at EDR: 01/26/2017 Date Made Active in Reports: 05/05/2017 Number of Days to Update: 99	Source: EPA Region 6 Telephone: 214-665-6597 Last EDR Contact: 04/28/2017 Next Scheduled EDR Contact: 08/07/2017 Data Release Frequency: Varies
INDIAN LUST R5: Leaking Underground Storage Leaking underground storage tanks located o	Tanks on Indian Land n Indian Land in Michigan, Minnesota and Wisconsin.
Date of Government Version: 11/14/2016 Date Data Arrived at EDR: 01/26/2017 Date Made Active in Reports: 05/05/2017 Number of Days to Update: 99	Source: EPA, Region 5 Telephone: 312-886-7439 Last EDR Contact: 04/28/2017 Next Scheduled EDR Contact: 08/07/2017 Data Release Frequency: Varies
INDIAN LUST R8: Leaking Underground Storage LUSTs on Indian land in Colorado, Montana,	Tanks on Indian Land North Dakota, South Dakota, Utah and Wyoming.
Date of Government Version: 10/17/2016 Date Data Arrived at EDR: 01/26/2017 Date Made Active in Reports: 05/05/2017 Number of Days to Update: 99	Source: EPA Region 8 Telephone: 303-312-6271 Last EDR Contact: 04/28/2017 Next Scheduled EDR Contact: 08/07/2017 Data Release Frequency: Quarterly
INDIAN LUST R7: Leaking Underground Storage LUSTs on Indian land in Iowa, Kansas, and N	Tanks on Indian Land Iebraska
Date of Government Version: 09/01/2016 Date Data Arrived at EDR: 01/26/2017 Date Made Active in Reports: 05/05/2017 Number of Days to Update: 99	Source: EPA Region 7 Telephone: 913-551-7003 Last EDR Contact: 04/28/2017 Next Scheduled EDR Contact: 08/07/2017 Data Release Frequency: Varies
SLIC: Statewide SLIC Cases (GEOTRACKER) Cleanup Program Sites (CPS; also known as and Cleanups [SLIC] sites) included in GeoTr sites that impact, or have the potential to impart	Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, racker. GeoTracker is the Water Boards data management system for act, water quality in California, with emphasis on groundwater.
Date of Government Version: 03/13/2017 Date Data Arrived at EDR: 03/14/2017 Date Made Active in Reports: 05/02/2017 Number of Days to Update: 49	Source: State Water Resources Control Board Telephone: 866-480-1028 Last EDR Contact: 03/14/2017 Next Scheduled EDR Contact: 06/26/2017 Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.		
Date of Government Version: 04/03/2003 Date Data Arrived at EDR: 04/07/2003 Date Made Active in Reports: 04/25/2003 Number of Days to Update: 18	Source: California Regional Water Quality Control Board, North Coast Region (1) Telephone: 707-576-2220 Last EDR Contact: 08/01/2011 Next Scheduled EDR Contact: 11/14/2011 Data Release Frequency: No Update Planned	
SLIC REG 2: Spills, Leaks, Investigation & Cleanup The SLIC (Spills, Leaks, Investigations and Cle from spills, leaks, and similar discharges.	Cost Recovery Listing eanup) program is designed to protect and restore water quality	
Date of Government Version: 09/30/2004 Date Data Arrived at EDR: 10/20/2004 Date Made Active in Reports: 11/19/2004 Number of Days to Update: 30	Source: Regional Water Quality Control Board San Francisco Bay Region (2) Telephone: 510-286-0457 Last EDR Contact: 09/19/2011 Next Scheduled EDR Contact: 01/02/2012 Data Release Frequency: Quarterly	
SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.		
Date of Government Version: 05/18/2006 Date Data Arrived at EDR: 05/18/2006 Date Made Active in Reports: 06/15/2006 Number of Days to Update: 28	Source: California Regional Water Quality Control Board Central Coast Region (3) Telephone: 805-549-3147 Last EDR Contact: 07/18/2011 Next Scheduled EDR Contact: 10/31/2011 Data Release Frequency: Semi-Annually	
SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.		
Date of Government Version: 11/17/2004 Date Data Arrived at EDR: 11/18/2004 Date Made Active in Reports: 01/04/2005 Number of Days to Update: 47	Source: Region Water Quality Control Board Los Angeles Region (4) Telephone: 213-576-6600 Last EDR Contact: 07/01/2011 Next Scheduled EDR Contact: 10/17/2011 Data Release Frequency: Varies	
SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.		
Date of Government Version: 04/01/2005 Date Data Arrived at EDR: 04/05/2005 Date Made Active in Reports: 04/21/2005 Number of Days to Update: 16	Source: Regional Water Quality Control Board Central Valley Region (5) Telephone: 916-464-3291 Last EDR Contact: 09/12/2011 Next Scheduled EDR Contact: 12/26/2011 Data Release Frequency: Semi-Annually	
SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.		
Date of Government Version: 05/24/2005 Date Data Arrived at EDR: 05/25/2005 Date Made Active in Reports: 06/16/2005 Number of Days to Update: 22	Source: Regional Water Quality Control Board, Victorville Branch Telephone: 619-241-6583 Last EDR Contact: 08/15/2011 Next Scheduled EDR Contact: 11/28/2011	

Data Release Frequency: Semi-Annually

SLIC REG 6L: SLIC Sites The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.		
Date of Government Version: 09/07/2004 Date Data Arrived at EDR: 09/07/2004 Date Made Active in Reports: 10/12/2004 Number of Days to Update: 35	Source: California Regional Water Quality Control Board, Lahontan Region Telephone: 530-542-5574 Last EDR Contact: 08/15/2011 Next Scheduled EDR Contact: 11/28/2011 Data Release Frequency: No Update Planned	
SLIC REG 7: SLIC List The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.		
Date of Government Version: 11/24/2004 Date Data Arrived at EDR: 11/29/2004 Date Made Active in Reports: 01/04/2005 Number of Days to Update: 36	Source: California Regional Quality Control Board, Colorado River Basin Region Telephone: 760-346-7491 Last EDR Contact: 08/01/2011 Next Scheduled EDR Contact: 11/14/2011 Data Release Frequency: No Update Planned	
SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.		
Date of Government Version: 04/03/2008 Date Data Arrived at EDR: 04/03/2008 Date Made Active in Reports: 04/14/2008 Number of Days to Update: 11	Source: California Region Water Quality Control Board Santa Ana Region (8) Telephone: 951-782-3298 Last EDR Contact: 09/12/2011 Next Scheduled EDR Contact: 12/26/2011 Data Release Frequency: Semi-Annually	
SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.		
Date of Government Version: 09/10/2007 Date Data Arrived at EDR: 09/11/2007 Date Made Active in Reports: 09/28/2007 Number of Days to Update: 17	Source: California Regional Water Quality Control Board San Diego Region (9) Telephone: 858-467-2980 Last EDR Contact: 08/08/2011 Next Scheduled EDR Contact: 11/21/2011 Data Release Frequency: Annually	
State and tribal registered storage tank lists		
FEMA UST: Underground Storage Tank Listing A listing of all FEMA owned underground stora	ige tanks.	
Date of Government Version: 01/01/2010 Date Data Arrived at EDR: 02/16/2010 Date Made Active in Reports: 04/12/2010 Number of Days to Update: 55	Source: FEMA Telephone: 202-646-5797 Last EDR Contact: 04/11/2017 Next Scheduled EDR Contact: 07/24/2017 Data Release Frequency: Varies	

### UST: Active UST Facilities

Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 03/12/2017	Source: SWRCB
Date Data Arrived at EDR: 03/16/2017	Telephone: 916-341-5851
Date Made Active in Reports: 05/12/2017	Last EDR Contact: 03/16/2017
Number of Days to Update: 57	Next Scheduled EDR Contact: 06/26/2017
	Data Release Frequency: Semi-Annually

AST: Aboveground Petroleum Storage Tank Facilities A listing of aboveground storage tank petroleum storage tank locations.		
Date of Government Version: 07/06/2016 Date Data Arrived at EDR: 07/12/2016 Date Made Active in Reports: 09/19/2016 Number of Days to Update: 69	Source: California Environmental Protection Agency Telephone: 916-327-5092 Last EDR Contact: 03/24/2017 Next Scheduled EDR Contact: 07/10/2017 Data Release Frequency: Quarterly	
INDIAN UST R5: Underground Storage Tanks on Indian Land The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).		
Date of Government Version: 01/14/2017 Date Data Arrived at EDR: 01/26/2017 Date Made Active in Reports: 05/05/2017 Number of Days to Update: 99	Source: EPA Region 5 Telephone: 312-886-6136 Last EDR Contact: 04/28/2017 Next Scheduled EDR Contact: 08/07/2017 Data Release Frequency: Varies	
INDIAN UST R6: Underground Storage Tanks on Indian Land The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian Iand in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).		
Date of Government Version: 10/01/2016 Date Data Arrived at EDR: 01/26/2017 Date Made Active in Reports: 05/05/2017 Number of Days to Update: 99	Source: EPA Region 6 Telephone: 214-665-7591 Last EDR Contact: 04/28/2017 Next Scheduled EDR Contact: 08/07/2017 Data Release Frequency: Semi-Annually	
INDIAN UST R7: Underground Storage Tanks on Indian Land The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).		
Date of Government Version: 09/01/2016 Date Data Arrived at EDR: 01/26/2017 Date Made Active in Reports: 05/05/2017 Number of Days to Update: 99	Source: EPA Region 7 Telephone: 913-551-7003 Last EDR Contact: 04/28/2017 Next Scheduled EDR Contact: 08/07/2017 Data Release Frequency: Varies	
INDIAN UST R8: Underground Storage Tanks on Indian Land The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian Iand in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).		
Date of Government Version: 10/17/2016 Date Data Arrived at EDR: 01/26/2017 Date Made Active in Reports: 05/05/2017 Number of Days to Update: 99	Source: EPA Region 8 Telephone: 303-312-6137 Last EDR Contact: 04/28/2017 Next Scheduled EDR Contact: 08/07/2017 Data Release Frequency: Quarterly	
INDIAN UST R9: Underground Storage Tanks on Indian Land The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).		
Date of Government Version: 10/06/2016 Date Data Arrived at EDR: 01/26/2017 Date Made Active in Reports: 05/05/2017 Number of Days to Update: 99	Source: EPA Region 9 Telephone: 415-972-3368 Last EDR Contact: 04/28/2017 Next Scheduled EDR Contact: 08/07/2017	

Data Release Frequency: Quarterly

INDIAN UST R1: Underground Storage Tanks on Indian Land The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).		
Date of Government Version: 11/14/2016 Date Data Arrived at EDR: 01/26/2017 Date Made Active in Reports: 05/05/2017 Number of Days to Update: 99	Source: EPA, Region 1 Telephone: 617-918-1313 Last EDR Contact: 04/28/2017 Next Scheduled EDR Contact: 08/07/2017 Data Release Frequency: Varies	
INDIAN UST R4: Underground Storage Tanks on Indian Land The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian Iand in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)		
Date of Government Version: 10/14/2016 Date Data Arrived at EDR: 01/27/2017 Date Made Active in Reports: 05/05/2017 Number of Days to Update: 98	Source: EPA Region 4 Telephone: 404-562-9424 Last EDR Contact: 04/28/2017 Next Scheduled EDR Contact: 08/07/2017 Data Release Frequency: Semi-Annually	
INDIAN UST R10: Underground Storage Tanks on Indian Land The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian Iand in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).		
Date of Government Version: 10/07/2016 Date Data Arrived at EDR: 01/26/2017 Date Made Active in Reports: 05/05/2017 Number of Days to Update: 99	Source: EPA Region 10 Telephone: 206-553-2857 Last EDR Contact: 04/28/2017 Next Scheduled EDR Contact: 08/07/2017 Data Release Frequency: Quarterly	
State and tribal voluntary cleanup sites		
INDIAN VCP R1: Voluntary Cleanup Priority Listing A listing of voluntary cleanup priority sites locar	ted on Indian Land located in Region 1.	
Date of Government Version: 07/27/2015 Date Data Arrived at EDR: 09/29/2015 Date Made Active in Reports: 02/18/2016 Number of Days to Update: 142	Source: EPA, Region 1 Telephone: 617-918-1102 Last EDR Contact: 03/27/2017 Next Scheduled EDR Contact: 07/10/2017 Data Release Frequency: Varies	
INDIAN VCP R7: Voluntary Cleanup Priority Lisitng A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.		
Date of Government Version: 03/20/2008 Date Data Arrived at EDR: 04/22/2008 Date Made Active in Reports: 05/19/2008 Number of Days to Update: 27	Source: EPA, Region 7 Telephone: 913-551-7365 Last EDR Contact: 04/20/2009 Next Scheduled EDR Contact: 07/20/2009 Data Release Frequency: Varies	
VCP: Voluntary Cleanup Program Properties Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.		
Date of Government Version: 01/30/2017 Date Data Arrived at EDR: 01/31/2017 Date Made Active in Reports: 05/23/2017 Number of Days to Update: 112	Source: Department of Toxic Substances Control Telephone: 916-323-3400 Last EDR Contact: 05/02/2017 Next Scheduled EDR Contact: 08/14/2017 Data Release Frequency: Quarterly	

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### State and tribal Brownfields sites

BROWNFIELDS: Considered Brownfieds Sites Listing

A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 01/03/2017 Date Data Arrived at EDR: 01/04/2017 Date Made Active in Reports: 03/02/2017 Number of Days to Update: 57 Source: State Water Resources Control Board Telephone: 916-323-7905 Last EDR Contact: 03/29/2017 Next Scheduled EDR Contact: 07/10/2017 Data Release Frequency: Varies

#### ADDITIONAL ENVIRONMENTAL RECORDS

### Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 03/02/2017 Date Data Arrived at EDR: 03/02/2017 Date Made Active in Reports: 04/07/2017 Number of Days to Update: 36 Source: Environmental Protection Agency Telephone: 202-566-2777 Last EDR Contact: 03/02/2017 Next Scheduled EDR Contact: 07/03/2017 Data Release Frequency: Semi-Annually

### Local Lists of Landfill / Solid Waste Disposal Sites

### WMUDS/SWAT: Waste Management Unit Database

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000 Date Data Arrived at EDR: 04/10/2000 Date Made Active in Reports: 05/10/2000 Number of Days to Update: 30 Source: State Water Resources Control Board Telephone: 916-227-4448 Last EDR Contact: 05/05/2017 Next Scheduled EDR Contact: 08/21/2017 Data Release Frequency: No Update Planned

#### SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 03/13/2017 Date Data Arrived at EDR: 03/14/2017 Date Made Active in Reports: 05/03/2017 Number of Days to Update: 50 Source: Department of Conservation Telephone: 916-323-3836 Last EDR Contact: 03/14/2017 Next Scheduled EDR Contact: 06/26/2017 Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing A listing of registered waste tire haulers.

	Date of Government Version: 01/13/2017 Date Data Arrived at EDR: 01/17/2017 Date Made Active in Reports: 05/31/2017 Number of Days to Update: 134	Source: Integrated Waste Management Board Telephone: 916-341-6422 Last EDR Contact: 05/15/2017 Next Scheduled EDR Contact: 08/28/2017 Data Release Frequency: Varies
INDI	AN ODI: Report on the Status of Open Dumps Location of open dumps on Indian land.	on Indian Lands
	Date of Government Version: 12/31/1998 Date Data Arrived at EDR: 12/03/2007 Date Made Active in Reports: 01/24/2008 Number of Days to Update: 52	Source: Environmental Protection Agency Telephone: 703-308-8245 Last EDR Contact: 05/01/2017 Next Scheduled EDR Contact: 08/14/2017 Data Release Frequency: Varies
ODI	Open Dump Inventory An open dump is defined as a disposal facility Subtitle D Criteria.	that does not comply with one or more of the Part 257 or Part 258
	Date of Government Version: 06/30/1985 Date Data Arrived at EDR: 08/09/2004 Date Made Active in Reports: 09/17/2004 Number of Days to Update: 39	Source: Environmental Protection Agency Telephone: 800-424-9346 Last EDR Contact: 06/09/2004 Next Scheduled EDR Contact: N/A Data Release Frequency: No Update Planned
DEB	RIS REGION 9: Torres Martinez Reservation III A listing of illegal dump sites location on the To County and northern Imperial County, Californi	legal Dump Site Locations prres Martinez Indian Reservation located in eastern Riverside a.
	Date of Government Version: 01/12/2009 Date Data Arrived at EDR: 05/07/2009 Date Made Active in Reports: 09/21/2009 Number of Days to Update: 137	Source: EPA, Region 9 Telephone: 415-947-4219 Last EDR Contact: 04/24/2017 Next Scheduled EDR Contact: 08/07/2017 Data Release Frequency: No Update Planned
IHS	OPEN DUMPS: Open Dumps on Indian Land A listing of all open dumps located on Indian La	and in the United States.
	Date of Government Version: 04/01/2014 Date Data Arrived at EDR: 08/06/2014 Date Made Active in Reports: 01/29/2015 Number of Days to Update: 176	Source: Department of Health & Human Serivces, Indian Health Service Telephone: 301-443-1452 Last EDR Contact: 05/05/2017 Next Scheduled EDR Contact: 08/14/2017 Data Release Frequency: Varies
Loc	al Lists of Hazardous waste / Contaminated S	Sites
US I	HST CDL: National Clandestine Laboratory Reg A listing of clandestine drug lab locations that h Register.	gister have been removed from the DEAs National Clandestine Laboratory
	Date of Government Version: 02/09/2017 Date Data Arrived at EDR: 03/08/2017 Date Made Active in Reports: 06/09/2017 Number of Days to Update: 93	Source: Drug Enforcement Administration Telephone: 202-307-1000 Last EDR Contact: 02/28/2017 Next Scheduled EDR Contact: 06/12/2017 Data Release Frequency: No Update Planned

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005 Date Data Arrived at EDR: 08/03/2006 Date Made Active in Reports: 08/24/2006 Number of Days to Update: 21 Source: Department of Toxic Substance Control Telephone: 916-323-3400 Last EDR Contact: 02/23/2009 Next Scheduled EDR Contact: 05/25/2009 Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 01/30/2017 Date Data Arrived at EDR: 01/31/2017 Date Made Active in Reports: 05/23/2017 Number of Days to Update: 112 Source: Department of Toxic Substances Control Telephone: 916-323-3400 Last EDR Contact: 05/02/2017 Next Scheduled EDR Contact: 08/14/2017 Data Release Frequency: Quarterly

### CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 12/31/2016	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 03/17/2017	Telephone: 916-255-6504
Date Made Active in Reports: 05/10/2017	Last EDR Contact: 04/10/2017
Number of Days to Update: 54	Next Scheduled EDR Contact: 07/24/2017
	Data Release Frequency: Varies

### TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995	Source: State Water Resources Control Board
Date Data Arrived at EDR: 08/30/1995	Telephone: 916-227-4364
Date Made Active in Reports: 09/26/1995	Last EDR Contact: 01/26/2009
Number of Days to Update: 27	Next Scheduled EDR Contact: 04/27/2009
	Data Release Frequency: No Update Planned

### US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/31/2017
Next Scheduled EDR Contact: 09/11/2017
Data Release Frequency: Quarterly

### Local Lists of Registered Storage Tanks

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994		
Date Data Arrived at EDR: 07/07/2005		
Date Made Active in Reports: 08/11/2005		
Number of Days to Update: 35		

Source: State Water Resources Control Board Telephone: N/A Last EDR Contact: 06/03/2005 Next Scheduled EDR Contact: N/A Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 03/09/2017	Source: Department of Public Health
Date Data Arrived at EDR: 03/17/2017	Telephone: 707-463-4466
Date Made Active in Reports: 05/23/2017	Last EDR Contact: 05/24/2017
Number of Days to Update: 67	Next Scheduled EDR Contact: 09/11/2017 Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990 Date Data Arrived at EDR: 01/25/1991 Date Made Active in Reports: 02/12/1991 Number of Days to Update: 18 Source: State Water Resources Control Board Telephone: 916-341-5851 Last EDR Contact: 07/26/2001 Next Scheduled EDR Contact: N/A Data Release Frequency: No Update Planned

### CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994 Date Data Arrived at EDR: 09/05/1995 Date Made Active in Reports: 09/29/1995 Number of Days to Update: 24 Source: California Environmental Protection Agency Telephone: 916-341-5851 Last EDR Contact: 12/28/1998 Next Scheduled EDR Contact: N/A Data Release Frequency: No Update Planned

### Local Land Records

LIENS: Environmental Liens Listing

A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 03/06/2017 Date Data Arrived at EDR: 03/07/2017 Date Made Active in Reports: 04/21/2017 Number of Days to Update: 45 Source: Department of Toxic Substances Control Telephone: 916-323-3400 Last EDR Contact: 06/02/2017 Next Scheduled EDR Contact: 09/18/2017 Data Release Frequency: Varies

### LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 02/18/2014 Date Data Arrived at EDR: 03/18/2014 Date Made Active in Reports: 04/24/2014 Number of Days to Update: 37 Source: Environmental Protection Agency Telephone: 202-564-6023 Last EDR Contact: 06/09/2017 Next Scheduled EDR Contact: 08/07/2017 Data Release Frequency: Varies

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 03/06/2017 Date Data Arrived at EDR: 03/07/2017 Date Made Active in Reports: 05/23/2017 Number of Days to Update: 77

Source: DTSC and SWRCB Telephone: 916-323-3400 Last EDR Contact: 06/06/2017 Next Scheduled EDR Contact: 09/18/2017 Data Release Frequency: Semi-Annually

### Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/28/2016	Source: U.S. Department of Transportation
Date Data Arrived at EDR: 12/28/2016	Telephone: 202-366-4555
Date Made Active in Reports: 02/03/2017	Last EDR Contact: 03/29/2017
Number of Days to Update: 37	Next Scheduled EDR Contact: 07/10/2017
	Data Release Frequency: Annually

### CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 12/06/2016	Source: Office of Emergency Services
Date Data Arrived at EDR: 01/25/2017	Telephone: 916-845-8400
Date Made Active in Reports: 05/10/2017	Last EDR Contact: 04/28/2017
Number of Days to Update: 105	Next Scheduled EDR Contact: 08/07/2017
	Data Release Frequency: Varies

### LDS: Land Disposal Sites Listing (GEOTRACKER)

Land Disposal sites (Landfills) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 03/13/2017 Source: State Water Qualilty Control Board Date Data Arrived at EDR: 03/14/2017 Telephone: 866-480-1028 Date Made Active in Reports: 05/02/2017 Last EDR Contact: 03/14/2017 Number of Days to Update: 49

Next Scheduled EDR Contact: 06/26/2017 Data Release Frequency: Quarterly

### MCS: Military Cleanup Sites Listing (GEOTRACKER)

Military sites (consisting of: Military UST sites; Military Privatized sites; and Military Cleanup sites [formerly known as DoD non UST]) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 03/13/2017 Date Data Arrived at EDR: 03/14/2017 Date Made Active in Reports: 05/02/2017 Number of Days to Update: 49

Source: State Water Resources Control Board Telephone: 866-480-1028 Last EDR Contact: 03/14/2017 Next Scheduled EDR Contact: 06/26/2017 Data Release Frequency: Quarterly

### SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012Source: FirstSearchDate Data Arrived at EDR: 01/03/2013Telephone: N/ADate Made Active in Reports: 02/22/2013Last EDR Contact: 01/03/2013Number of Days to Update: 50Next Scheduled EDR Contact: N/AData Release Frequency: No Update Planned

#### Other Ascertainable Records

### RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 12/12/2016 Date Data Arrived at EDR: 12/28/2016 Date Made Active in Reports: 02/10/2017 Number of Days to Update: 44 Source: Environmental Protection Agency Telephone: (415) 495-8895 Last EDR Contact: 05/02/2017 Next Scheduled EDR Contact: 04/10/2017 Data Release Frequency: Varies

### FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/31/2015 Date Data Arrived at EDR: 07/08/2015 Date Made Active in Reports: 10/13/2015 Number of Days to Update: 97 Source: U.S. Army Corps of Engineers Telephone: 202-528-4285 Last EDR Contact: 02/24/2017 Next Scheduled EDR Contact: 06/05/2017 Data Release Frequency: Varies

### DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005	
Date Data Arrived at EDR: 11/10/2006	
Date Made Active in Reports: 01/11/2007	
Number of Days to Update: 62	

Source: USGS Telephone: 888-275-8747 Last EDR Contact: 04/14/2017 Next Scheduled EDR Contact: 07/24/2017 Data Release Frequency: Semi-Annually

### FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Source: U.S. Geological Survey Telephone: 888-275-8747 Last EDR Contact: 04/14/2017 Next Scheduled EDR Contact: 07/24/2017 Data Release Frequency: N/A

### SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017 Date Data Arrived at EDR: 02/03/2017 Date Made Active in Reports: 04/07/2017 Number of Days to Update: 63 Source: Environmental Protection Agency Telephone: 615-532-8599 Last EDR Contact: 05/19/2017 Next Scheduled EDR Contact: 08/28/2017 Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 02/13/2017 Date Data Arrived at EDR: 02/15/2017 Date Made Active in Reports: 05/12/2017 Number of Days to Update: 86 Source: Environmental Protection Agency Telephone: 202-566-1917 Last EDR Contact: 05/17/2017 Next Scheduled EDR Contact: 08/28/2017 Data Release Frequency: Quarterly

### EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013 Date Data Arrived at EDR: 03/21/2014 Date Made Active in Reports: 06/17/2014 Number of Days to Update: 88 Source: Environmental Protection Agency Telephone: 617-520-3000 Last EDR Contact: 05/08/2017 Next Scheduled EDR Contact: 08/21/2017 Data Release Frequency: Quarterly

### 2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 04/22/2013 Date Data Arrived at EDR: 03/03/2015 Date Made Active in Reports: 03/09/2015 Number of Days to Update: 6 Source: Environmental Protection Agency Telephone: 703-308-4044 Last EDR Contact: 05/05/2017 Next Scheduled EDR Contact: 08/21/2017 Data Release Frequency: Varies

### TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2012 Date Data Arrived at EDR: 01/15/2015 Date Made Active in Reports: 01/29/2015 Number of Days to Update: 14 Source: EPA Telephone: 202-260-5521 Last EDR Contact: 03/24/2017 Next Scheduled EDR Contact: 07/03/2017 Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2014 Date Data Arrived at EDR: 11/24/2015 Date Made Active in Reports: 04/05/2016 Number of Days to Update: 133 Source: EPA Telephone: 202-566-0250 Last EDR Contact: 05/26/2017 Next Scheduled EDR Contact: 09/04/2017 Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009 Date Data Arrived at EDR: 12/10/2010 Date Made Active in Reports: 02/25/2011 Number of Days to Update: 77

Source: EPA Telephone: 202-564-4203 Last EDR Contact: 04/26/2017 Next Scheduled EDR Contact: 08/07/2017 Data Release Frequency: Annually

### ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 11/25/2013	Source: EPA
Date Data Arrived at EDR: 12/12/2013	Telephone: 703-416-0223
Date Made Active in Reports: 02/24/2014	Last EDR Contact: 06/09/2017
Number of Days to Update: 74	Next Scheduled EDR Contact: 09/18/2017
	Data Release Frequency: Annually

### RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 02/01/2017 Date Data Arrived at EDR: 02/09/2017 Date Made Active in Reports: 04/07/2017 Number of Days to Update: 57 Source: Environmental Protection Agency Telephone: 202-564-8600 Last EDR Contact: 04/21/2017 Next Scheduled EDR Contact: 08/07/2017 Data Release Frequency: Varies

### RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995 Date Data Arrived at EDR: 07/03/1995 Date Made Active in Reports: 08/07/1995 Number of Days to Update: 35 Source: EPA Telephone: 202-564-4104 Last EDR Contact: 06/02/2008 Next Scheduled EDR Contact: 09/01/2008 Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties A listing of verified Potentially Responsible Parties	rties
Date of Government Version: 10/25/2013 Date Data Arrived at EDR: 10/17/2014 Date Made Active in Reports: 10/20/2014 Number of Days to Update: 3	Source: EPA Telephone: 202-564-6023 Last EDR Contact: 06/06/2017 Next Scheduled EDR Contact: 08/21/2017 Data Release Frequency: Quarterly
PADS: PCB Activity Database System PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.	
Date of Government Version: 01/20/2016 Date Data Arrived at EDR: 04/28/2016 Date Made Active in Reports: 09/02/2016 Number of Days to Update: 127	Source: EPA Telephone: 202-566-0500 Last EDR Contact: 04/10/2017 Next Scheduled EDR Contact: 07/24/2017 Data Release Frequency: Annually
ICIS: Integrated Compliance Information System The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.	
Date of Government Version: 11/18/2016 Date Data Arrived at EDR: 11/23/2016 Date Made Active in Reports: 02/10/2017 Number of Days to Update: 79	Source: Environmental Protection Agency Telephone: 202-564-2501 Last EDR Contact: 04/10/2017 Next Scheduled EDR Contact: 07/24/2017 Data Release Frequency: Quarterly
FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act) FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.	
Date of Government Version: 04/09/2009 Date Data Arrived at EDR: 04/16/2009 Date Made Active in Reports: 05/11/2009 Number of Days to Update: 25	Source: EPA/Office of Prevention, Pesticides and Toxic Substances Telephone: 202-566-1667 Last EDR Contact: 05/19/2017 Next Scheduled EDR Contact: 09/04/2017 Data Release Frequency: Quarterly
FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act) A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.	
Date of Government Version: 04/09/2009 Date Data Arrived at EDR: 04/16/2009 Date Made Active in Reports: 05/11/2009 Number of Days to Update: 25	Source: EPA Telephone: 202-566-1667 Last EDR Contact: 05/19/2017 Next Scheduled EDR Contact: 09/04/2017 Data Release Frequency: Quarterly
MLTS: Material Licensing Tracking System MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.	
Date of Government Version: 08/30/2016 Date Data Arrived at EDR: 09/08/2016 Date Made Active in Reports: 10/21/2016 Number of Days to Update: 43	Source: Nuclear Regulatory Commission Telephone: 301-415-7169 Last EDR Contact: 05/08/2017 Next Scheduled EDR Contact: 08/21/2017 Data Release Frequency: Quarterly

### COAL ASH DOE: Steam-Electric Plant Operation Data A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005	Source: Department of Energy
Date Data Arrived at EDR: 08/07/2009	Telephone: 202-586-8719
Date Made Active in Reports: 10/22/2009	Last EDR Contact: 06/05/2017
Number of Days to Update: 76	Next Scheduled EDR Contact: 09/18/2017
	Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014	Source: Environmental Protection Agency
Date Data Arrived at EDR: 09/10/2014	Telephone: N/A
Date Made Active in Reports: 10/20/2014	Last EDR Contact: 06/05/2017
Number of Days to Update: 40	Next Scheduled EDR Contact: 09/18/2017
	Data Release Frequency: Varies

### PCB TRANSFORMER: PCB Transformer Registration Database

The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 02/01/2011	Source: Environmental Protection Agency
Date Data Arrived at EDR: 10/19/2011	Telephone: 202-566-0517
Date Made Active in Reports: 01/10/2012	Last EDR Contact: 04/28/2017
Number of Days to Update: 83	Next Scheduled EDR Contact: 08/07/2017
	Data Release Frequency: Varies

### RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 01/04/2017 Date Data Arrived at EDR: 01/06/2017 Date Made Active in Reports: 02/10/2017 Number of Days to Update: 35 Source: Environmental Protection Agency Telephone: 202-343-9775 Last EDR Contact: 04/06/2017 Next Scheduled EDR Contact: 07/17/2017 Data Release Frequency: Quarterly

### HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/01/2007	Telephone: 202-564-2501
Date Made Active in Reports: 04/10/2007	Last EDR Contact: 12/17/2007
Number of Days to Update: 40	Next Scheduled EDR Contact: 03/17/2008
	Data Release Frequency: No Update Planned

### HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.
	Date of Government Version: 10/19/2006 Date Data Arrived at EDR: 03/01/2007 Date Made Active in Reports: 04/10/2007 Number of Days to Update: 40	Source: Environmental Protection Agency Telephone: 202-564-2501 Last EDR Contact: 12/17/2008 Next Scheduled EDR Contact: 03/17/2008 Data Release Frequency: No Update Planned	
DOT	OPS: Incident and Accident Data Department of Transporation, Office of Pipeline	Safety Incident and Accident data.	
	Date of Government Version: 07/31/2012 Date Data Arrived at EDR: 08/07/2012 Date Made Active in Reports: 09/18/2012 Number of Days to Update: 42	Source: Department of Transporation, Office of Pipeline Safety Telephone: 202-366-4595 Last EDR Contact: 05/02/2017 Next Scheduled EDR Contact: 08/14/2017 Data Release Frequency: Varies	
CON	SENT: Superfund (CERCLA) Consent Decrees Major legal settlements that establish responsit periodically by United States District Courts after	pility and standards for cleanup at NPL (Superfund) sites. Released or settlement by parties to litigation matters.	
	Date of Government Version: 09/30/2016 Date Data Arrived at EDR: 11/18/2016 Date Made Active in Reports: 02/03/2017 Number of Days to Update: 77	Source: Department of Justice, Consent Decree Library Telephone: Varies Last EDR Contact: 03/27/2017 Next Scheduled EDR Contact: 07/10/2017 Data Release Frequency: Varies	
BRS	3RS: Biennial Reporting System The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.		
	Date of Government Version: 12/31/2013 Date Data Arrived at EDR: 02/24/2015 Date Made Active in Reports: 09/30/2015 Number of Days to Update: 218	Source: EPA/NTIS Telephone: 800-424-9346 Last EDR Contact: 05/26/2017 Next Scheduled EDR Contact: 09/04/2017 Data Release Frequency: Biennially	
INDI	AN RESERV: Indian Reservations This map layer portrays Indian administered lar than 640 acres.	nds of the United States that have any area equal to or greater	
	Date of Government Version: 12/31/2014 Date Data Arrived at EDR: 07/14/2015 Date Made Active in Reports: 01/10/2017 Number of Days to Update: 546	Source: USGS Telephone: 202-208-3710 Last EDR Contact: 04/14/2017 Next Scheduled EDR Contact: 07/24/2017 Data Release Frequency: Semi-Annually	
FUSI	RAP: Formerly Utilized Sites Remedial Action P DOE established the Formerly Utilized Sites Re radioactive contamination remained from Manh	rogram emedial Action Program (FUSRAP) in 1974 to remediate sites where attan Project and early U.S. Atomic Energy Commission (AEC) operations.	
	Date of Government Version: 12/23/2016 Date Data Arrived at EDR: 12/27/2016 Date Made Active in Reports: 02/17/2017 Number of Days to Update: 52	Source: Department of Energy Telephone: 202-586-3559 Last EDR Contact: 05/05/2017 Next Scheduled EDR Contact: 08/21/2017 Data Release Frequency: Varies	
имт	RA: Uranium Mill Tailings Sites		

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

	Date of Government Version: 09/14/2010	Source: Department of Energy	
	Date Data Arrived at EDR: 10/07/2011	Telephone: 505-845-0011	
	Date Made Active in Reports: 03/01/2012 Number of Days to Update: 146	Last EDR Contact: 05/22/2017 Next Scheduled EDR Contact: 09/04/2017	
		Data Release Frequency: Varies	
LEA	D SMELTER 1: Lead Smelter Sites A listing of former lead smelter site locations.		
	Date of Government Version: 12/05/2016	Source: Environmental Protection Agency	
	Date Data Arrived at EDR: 01/05/2017 Date Made Active in Reports: 02/10/2017	Telephone: 703-603-8787	
	Number of Days to Update: 36	Next Scheduled EDR Contact: 07/17/2017	
		Data Release Frequency: Varies	
LEAD SMELTER 2: Lead Smelter Sites A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust			
	Date of Government Version: 04/05/2001	Source: American Journal of Public Health	
	Date Data Arrived at EDR: 10/27/2010	Telephone: 703-305-6451	
	Number of Days to Update: 36	Next Scheduled EDR Contact: N/A	
		Data Release Frequency: No Update Planned	
US A	AIRS (AFS): Aerometric Information Retrieval Sy	/stem Facility Subsystem (AFS)	
	The database is a sub-system of Aerometric In	formation Retrieval System (AIRS). AFS contains compliance data	
	information comes from source reports by vario	J.S. EPA and/or state and local air regulatory agencies. This ous stationary sources of air pollution, such as electric power plants.	
	steel mills, factories, and universities, and prov	ides information about the air pollutants they produce. Action,	
	air program, air program pollutant, and general data from industrial plants.	level plant data. It is used to track emissions and compliance	
	Date of Government Version: 10/12/2016	Source: EPA	
	Date Made Active in Reports: 02/03/2017	Last EDR Contact: 03/07/2017	
	Number of Days to Update: 100	Next Scheduled EDR Contact: 07/10/2017	
		Data Release Frequency: Annually	
US A	AIRS MINOR: Air Facility System Data A listing of minor source facilities.		
	Date of Government Version: 10/12/2016	Source: EPA	
	Date Data Arrived at EDR: 10/26/2016	Telephone: 202-564-2496	
	Number of Days to Update: 100	Next Scheduled EDR Contact: 04/10/2017	
		Data Release Frequency: Annually	
US MINES: Mines Master Index File			
	Contains all mine identification numbers issued violation information.	for mines active or opened since 1971. The data also includes	
	Date of Government Version: 02/08/2017	Source: Department of Labor, Mine Safety and Health Administration	
	Date Data Arrived at EDR: 02/28/2017 Date Made Active in Reports: 04/07/2017	Telephone: 303-231-5959 Last EDR Contact: 05/31/2017	
	Number of Days to Update: 38	Next Scheduled EDR Contact: 09/11/2017	
		Data Release Frequency: Semi-Annually	
USN	AINES 2: Ferrous and Nonferrous Metal Mines I	Database Listing	
	I his map layer includes terrous (terrous metal mines are facilities that extract ferrous metals, such as iron		

ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 12/05/2005 Date Data Arrived at EDR: 02/29/2008 Date Made Active in Reports: 04/18/2008 Number of Days to Update: 49 Source: USGS Telephone: 703-648-7709 Last EDR Contact: 05/31/2017 Next Scheduled EDR Contact: 09/11/2017 Data Release Frequency: Varies

## US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011 Date Data Arrived at EDR: 06/08/2011 Date Made Active in Reports: 09/13/2011 Number of Days to Update: 97 Source: USGS Telephone: 703-648-7709 Last EDR Contact: 06/02/2017 Next Scheduled EDR Contact: 09/11/2017 Data Release Frequency: Varies

## ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 03/14/2017 Date Data Arrived at EDR: 03/17/2017 Date Made Active in Reports: 04/07/2017 Number of Days to Update: 21 Source: Department of Interior Telephone: 202-208-2609 Last EDR Contact: 06/09/2017 Next Scheduled EDR Contact: 09/25/2017 Data Release Frequency: Quarterly

## FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 04/04/2017 Date Data Arrived at EDR: 04/07/2017 Date Made Active in Reports: 05/12/2017 Number of Days to Update: 35 Source: EPA Telephone: (415) 947-8000 Last EDR Contact: 06/07/2017 Next Scheduled EDR Contact: 09/18/2017 Data Release Frequency: Quarterly

#### ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 03/19/2017	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/21/2017	Telephone: 202-564-2280
Date Made Active in Reports: 05/12/2017	Last EDR Contact: 06/07/2017
Number of Days to Update: 52	Next Scheduled EDR Contact: 09/18/2017
	Data Release Frequency: Quarterly

## UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Source: Department of Defense
Telephone: 571-373-0407
Last EDR Contact: 05/22/2017
Next Scheduled EDR Contact: 07/31/2017
Data Release Frequency: Varies

۵	DOCKET HWC: Hazardous Waste Compliance Docket Listing A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.		
	Date of Government Version: 06/02/2016 Date Data Arrived at EDR: 06/03/2016 Date Made Active in Reports: 09/02/2016 Number of Days to Update: 91	Source: Environmental Protection Agency Telephone: 202-564-0527 Last EDR Contact: 05/24/2017 Next Scheduled EDR Contact: 09/11/2017 Data Release Frequency: Varies	
F	FUELS PROGRAM: EPA Fuels Program Registered Listing This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.		
	Date of Government Version: 02/22/2017 Date Data Arrived at EDR: 02/22/2017 Date Made Active in Reports: 05/12/2017 Number of Days to Update: 79	Source: EPA Telephone: 800-385-6164 Last EDR Contact: 05/24/2017 Next Scheduled EDR Contact: 09/04/2017 Data Release Frequency: Quarterly	
CA BOND EXP. PLAN: Bond Expenditure Plan Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.		ite-specific expenditure plan as the basis for an appropriation of ds. It is not updated.	
	Date of Government Version: 01/01/1989 Date Data Arrived at EDR: 07/27/1994 Date Made Active in Reports: 08/02/1994 Number of Days to Update: 6	Source: Department of Health Services Telephone: 916-255-2118 Last EDR Contact: 05/31/1994 Next Scheduled EDR Contact: N/A Data Release Frequency: No Update Planned	
C	CORTESE: "Cortese" Hazardous Waste & Substances Sites List The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).		
	Date of Government Version: 12/28/2016 Date Data Arrived at EDR: 12/28/2016 Date Made Active in Reports: 03/02/2017 Number of Days to Update: 64	Source: CAL EPA/Office of Emergency Information Telephone: 916-323-3400 Last EDR Contact: 03/29/2017 Next Scheduled EDR Contact: 07/10/2017 Data Release Frequency: Quarterly	
DRYCLEANERS: Cleaner Facilities A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundr and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.			
	Date of Government Version: 03/09/2017 Date Data Arrived at EDR: 04/11/2017 Date Made Active in Reports: 05/23/2017 Number of Days to Update: 42	Source: Department of Toxic Substance Control Telephone: 916-327-4498 Last EDR Contact: 06/02/2017 Next Scheduled EDR Contact: 09/18/2017 Data Release Frequency: Annually	
E	EMI: Emissions Inventory Data Toxics and criteria pollutant emissions data c	ollected by the ARB and local air pollution agencies.	
	Date of Government Version: 12/31/2014 Date Data Arrived at EDR: 09/23/2016 Date Made Active in Reports: 10/24/2016 Number of Days to Update: 31	Source: California Air Resources Board Telephone: 916-322-2990 Last EDR Contact: 03/21/2017 Next Scheduled EDR Contact: 07/03/2017	

Data Release Frequency: Varies

#### ENF: Enforcement Action Listing

A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 01/23/2017	Source: State Water Resoruces Control Board
Date Data Arrived at EDR: 01/27/2017	Telephone: 916-445-9379
Date Made Active in Reports: 05/25/2017	Last EDR Contact: 04/24/2017
Number of Days to Update: 118	Next Scheduled EDR Contact: 08/07/2017
	Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

Financial Assurance information

Date of Government Version: 04/25/2016	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 04/29/2016	Telephone: 916-255-3628
Date Made Active in Reports: 06/21/2016	Last EDR Contact: 06/02/2017
Number of Days to Update: 53	Next Scheduled EDR Contact: 08/07/2017
	Data Release Frequency: Varies

## Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 02/14/2017	Source: California Integrated Waste Management Board
Date Data Arrived at EDR: 02/17/2017	Telephone: 916-341-6066
Date Made Active in Reports: 05/25/2017	Last EDR Contact: 05/15/2017
Number of Days to Update: 97	Next Scheduled EDR Contact: 08/28/2017
	Data Release Frequency: Varies

### HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

Date of Government Version: 12/31/2015	Source: California Environmental Protection Agency
Date Data Arrived at EDR: 10/12/2016	Telephone: 916-255-1136
Date Made Active in Reports: 12/15/2016	Last EDR Contact: 04/14/2017
Number of Days to Update: 64	Next Scheduled EDR Contact: 07/24/2017
	Data Release Frequency: Annually

## ICE: ICE

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 11/21/2016	Source: Department of Toxic Subsances Control
Date Data Arrived at EDR: 11/22/2016	Telephone: 877-786-9427
Date Made Active in Reports: 01/23/2017	Last EDR Contact: 05/24/2017
Number of Days to Update: 62	Next Scheduled EDR Contact: 09/04/2017
	Data Release Frequency: Quarterly

## HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001 Date Data Arrived at EDR: 01/22/2009 Date Made Active in Reports: 04/08/2009 Number of Days to Update: 76 Source: Department of Toxic Substances Control Telephone: 916-323-3400 Last EDR Contact: 01/22/2009 Next Scheduled EDR Contact: N/A Data Release Frequency: No Update Planned

## HWP: EnviroStor Permitted Facilities Listing

Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 11/21/2016	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 11/22/2016	Telephone: 916-323-3400
Date Made Active in Reports: 01/23/2017	Last EDR Contact: 05/24/2017
Number of Days to Update: 62	Next Scheduled EDR Contact: 09/04/2017
, , , , , , , , , , , , , , , , , , ,	Data Release Frequency: Quarterly

#### HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 04/11/2017	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 04/13/2017	Telephone: 916-440-7145
Date Made Active in Reports: 04/26/2017	Last EDR Contact: 04/13/2017
Number of Days to Update: 13	Next Scheduled EDR Contact: 07/24/2017
	Data Release Frequency: Quarterly

#### MINES: Mines Site Location Listing

A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 09/12/2016	Source: Department of Conservation
Date Data Arrived at EDR: 09/14/2016	Telephone: 916-322-1080
Date Made Active in Reports: 10/14/2016	Last EDR Contact: 03/13/2017
Number of Days to Update: 30	Next Scheduled EDR Contact: 06/26/2017
	Data Release Frequency: Varies

## MWMP: Medical Waste Management Program Listing

The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 12/02/2016	Source: Department of Public Health
Date Data Arrived at EDR: 12/06/2016	Telephone: 916-558-1784
Date Made Active in Reports: 03/02/2017	Last EDR Contact: 06/06/2017
Number of Days to Update: 86	Next Scheduled EDR Contact: 09/18/2017
	Data Release Frequency: Varies

#### NPDES: NPDES Permits Listing

A listing of NPDES permits, including stormwater.

Date of Government Version: 11/14/2016	Source: State Water Resources Control Board
Date Data Arrived at EDR: 11/15/2016	Telephone: 916-445-9379
Date Made Active in Reports: 03/02/2017	Last EDR Contact: 05/17/2017
Number of Days to Update: 107	Next Scheduled EDR Contact: 08/28/2017
	Data Release Frequency: Quarterly

### PEST LIC: Pesticide Regulation Licenses Listing

A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

Date of Government Version: 12/06/2016	
Date Data Arrived at EDR: 12/06/2016	
Date Made Active in Reports: 03/03/2017	
Number of Days to Update: 87	

Source: Department of Pesticide Regulation Telephone: 916-445-4038 Last EDR Contact: 06/07/2017 Next Scheduled EDR Contact: 09/18/2017 Data Release Frequency: Quarterly

#### PROC: Certified Processors Database A listing of certified processors.

Date of Government Version: 03/13/2017 Date Data Arrived at EDR: 03/14/2017 Date Made Active in Reports: 05/03/2017 Number of Days to Update: 50

Source: Department of Conservation Telephone: 916-323-3836 Last EDR Contact: 03/14/2017 Next Scheduled EDR Contact: 06/26/2017 Data Release Frequency: Quarterly

#### NOTIFY 65: Proposition 65 Records

Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 12/16/2016 Date Data Arrived at EDR: 12/22/2016 Date Made Active in Reports: 03/02/2017 Number of Days to Update: 70

Source: State Water Resources Control Board Telephone: 916-445-3846 Last EDR Contact: 04/03/2017 Next Scheduled EDR Contact: 07/03/2017 Data Release Frequency: No Update Planned

UIC: UIC Listing

A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 01/20/2017	Source: Deaprtment of Conservation
Date Data Arrived at EDR: 03/14/2017	Telephone: 916-445-2408
Date Made Active in Reports: 05/03/2017	Last EDR Contact: 03/14/2017
Number of Days to Update: 50	Next Scheduled EDR Contact: 06/26/2017
	Data Release Frequency: Varies

#### WASTEWATER PITS: Oil Wastewater Pits Listing

Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water board?s review found that more than one-third of the region?s active disposal pits are operating without permission.

Date of Government Version: 04/15/2015 Date Data Arrived at EDR: 04/17/2015 Date Made Active in Reports: 06/23/2015 Number of Days to Update: 67

Source: RWQCB, Central Valley Region Telephone: 559-445-5577 Last EDR Contact: 04/14/2017 Next Scheduled EDR Contact: 07/24/2017 Data Release Frequency: Varies

#### WDS: Waste Discharge System

Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007	Source: State Water Resources Control Board
Date Data Arrived at EDR: 06/20/2007	Telephone: 916-341-5227
Date Made Active in Reports: 06/29/2007	Last EDR Contact: 05/22/2017
Number of Days to Update: 9	Next Scheduled EDR Contact: 09/04/2017
	Data Release Frequency: Quarterly

## WIP: Well Investigation Program Case List

Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009	Source: Los Angeles Water Quality Control Board
Date Data Arrived at EDR: 07/21/2009	Telephone: 213-576-6726
Date Made Active in Reports: 08/03/2009	Last EDR Contact: 03/24/2017
Number of Days to Update: 13	Next Scheduled EDR Contact: 07/10/2017
	Data Release Frequency: Varies

### EDR HIGH RISK HISTORICAL RECORDS

#### EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A Date Data Arrived at EDR: N/A Date Made Active in Reports: N/A Number of Days to Update: N/A Source: EDR, Inc. Telephone: N/A Last EDR Contact: N/A Next Scheduled EDR Contact: N/A Data Release Frequency: No Update Planned

### EDR Hist Auto: EDR Exclusive Historic Gas Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A Date Data Arrived at EDR: N/A Date Made Active in Reports: N/A Number of Days to Update: N/A Source: EDR, Inc. Telephone: N/A Last EDR Contact: N/A Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

#### EDR Hist Cleaner: EDR Exclusive Historic Dry Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A Date Data Arrived at EDR: N/A Date Made Active in Reports: N/A Number of Days to Update: N/A Source: EDR, Inc. Telephone: N/A Last EDR Contact: N/A Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

## EDR RECOVERED GOVERNMENT ARCHIVES

## Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A Date Data Arrived at EDR: 07/01/2013 Date Made Active in Reports: 01/13/2014 Number of Days to Update: 196 Source: Department of Resources Recycling and Recovery Telephone: N/A Last EDR Contact: 06/01/2012 Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A Date Data Arrived at EDR: 07/01/2013 Date Made Active in Reports: 12/30/2013 Number of Days to Update: 182 Source: State Water Resources Control Board Telephone: N/A Last EDR Contact: 06/01/2012 Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

### COUNTY RECORDS

#### ALAMEDA COUNTY:

#### **Contaminated Sites**

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 04/10/2017 Date Data Arrived at EDR: 04/11/2017 Date Made Active in Reports: 05/12/2017 Number of Days to Update: 31 Source: Alameda County Environmental Health Services Telephone: 510-567-6700 Last EDR Contact: 04/10/2017 Next Scheduled EDR Contact: 07/24/2017 Data Release Frequency: Semi-Annually

#### Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 04/10/2017	Source: Alameda County Environmental Health Services
Date Data Arrived at EDR: 04/11/2017	Telephone: 510-567-6700
Date Made Active in Reports: 05/02/2017	Last EDR Contact: 04/10/2017
Number of Days to Update: 21	Next Scheduled EDR Contact: 04/24/2047
	Data Release Frequency: Semi-Annually

### AMADOR COUNTY:

CUPA Facility List Cupa Facility List

> Date of Government Version: 03/06/2017 Date Data Arrived at EDR: 03/08/2017 Date Made Active in Reports: 04/14/2017 Number of Days to Update: 37

Source: Amador County Environmental Health Telephone: 209-223-6439 Last EDR Contact: 06/02/2017 Next Scheduled EDR Contact: 09/18/2017 Data Release Frequency: Varies

BUTTE COUNTY:

CUPA Facility Listing Cupa facility list.

Date of Government Version: 01/31/2017 Date Data Arrived at EDR: 02/07/2017 Date Made Active in Reports: 05/12/2017 Number of Days to Update: 94 Source: Public Health Department Telephone: 530-538-7149 Last EDR Contact: 04/10/2017 Next Scheduled EDR Contact: 07/24/2017 Data Release Frequency: No Update Planned

## CALVERAS COUNTY:

CUPA Facility Listing Cupa Facility Listing

> Date of Government Version: 01/09/2017 Date Data Arrived at EDR: 01/11/2017 Date Made Active in Reports: 03/02/2017 Number of Days to Update: 50

Source: Calveras County Environmental Health Telephone: 209-754-6399 Last EDR Contact: 03/27/2017 Next Scheduled EDR Contact: 07/10/2017 Data Release Frequency: Quarterly

## COLUSA COUNTY:

#### CUPA Facility List Cupa facility list.

Date of Government Version: 02/23/2017 Date Data Arrived at EDR: 02/24/2017 Date Made Active in Reports: 05/12/2017 Number of Days to Update: 77

Source: Health & Human Services Telephone: 530-458-0396 Last EDR Contact: 06/02/2017 Next Scheduled EDR Contact: 08/21/2017 Data Release Frequency: Varies

### CONTRA COSTA COUNTY:

#### Site List

List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 11/17/2016 Date Data Arrived at EDR: 11/22/2016 Date Made Active in Reports: 01/26/2017 Number of Days to Update: 65 Source: Contra Costa Health Services Department Telephone: 925-646-2286 Last EDR Contact: 05/01/2017 Next Scheduled EDR Contact: 08/14/2017 Data Release Frequency: Semi-Annually

### DEL NORTE COUNTY:

CUPA Facility List

Cupa Facility list

Date of Government Version: 01/31/2017 Date Data Arrived at EDR: 02/03/2017 Date Made Active in Reports: 04/14/2017 Number of Days to Update: 70 Source: Del Norte County Environmental Health Division Telephone: 707-465-0426 Last EDR Contact: 05/01/2017 Next Scheduled EDR Contact: 08/14/2017 Data Release Frequency: Varies

#### EL DORADO COUNTY:

### CUPA Facility List CUPA facility list.

Date of Government Version: 02/24/2017 Date Data Arrived at EDR: 02/28/2017 Date Made Active in Reports: 05/12/2017 Number of Days to Update: 73 Source: El Dorado County Environmental Management Department Telephone: 530-621-6623 Last EDR Contact: 05/01/2017 Next Scheduled EDR Contact: 08/14/2017 Data Release Frequency: Varies

## FRESNO COUNTY:

**CUPA Resources List** 

Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 04/06/2017 Date Data Arrived at EDR: 04/07/2017 Date Made Active in Reports: 05/17/2017 Number of Days to Update: 40 Source: Dept. of Community Health Telephone: 559-445-3271 Last EDR Contact: 03/31/2017 Next Scheduled EDR Contact: 07/17/2017 Data Release Frequency: Semi-Annually

#### GLENN COUNTY:

CUPA Facility List Cupa facility list

> Date of Government Version: 12/02/2016 Date Data Arrived at EDR: 02/03/2017 Date Made Active in Reports: 05/25/2017 Number of Days to Update: 111

Source: Glenn County Air Pollution Control District Telephone: 830-934-6500 Last EDR Contact: 04/24/2017 Next Scheduled EDR Contact: 08/07/2017 Data Release Frequency: Varies

#### HUMBOLDT COUNTY:

CUPA Facility List CUPA facility list.

> Date of Government Version: 03/20/2017 Date Data Arrived at EDR: 03/21/2017 Date Made Active in Reports: 05/17/2017 Number of Days to Update: 57

Source: Humboldt County Environmental Health Telephone: N/A Last EDR Contact: 05/22/2017 Next Scheduled EDR Contact: 09/04/2017 Data Release Frequency: Varies

#### IMPERIAL COUNTY:

CUPA Facility List

Cupa facility list.

Date of Government Version: 01/23/2017 Date Data Arrived at EDR: 01/25/2017 Date Made Active in Reports: 03/02/2017 Number of Days to Update: 36 Source: San Diego Border Field Office Telephone: 760-339-2777 Last EDR Contact: 04/24/2017 Next Scheduled EDR Contact: 08/07/2017 Data Release Frequency: Varies

INYO COUNTY:

## CUPA Facility List

Cupa facility list.

Date of Government Version: 03/09/2017 Date Data Arrived at EDR: 03/09/2017 Date Made Active in Reports: 05/25/2017 Number of Days to Update: 77 Source: Inyo County Environmental Health Services Telephone: 760-878-0238 Last EDR Contact: 06/02/2017 Next Scheduled EDR Contact: 09/04/2017 Data Release Frequency: Varies

#### KERN COUNTY:

Underground Storage Tank Sites & Tank Listing Kern County Sites and Tanks Listing.

> Date of Government Version: 02/07/2017 Date Data Arrived at EDR: 02/10/2017 Date Made Active in Reports: 05/02/2017 Number of Days to Update: 81

Source: Kern County Environment Health Services Department Telephone: 661-862-8700 Last EDR Contact: 05/05/2017 Next Scheduled EDR Contact: 08/21/2017 Data Release Frequency: Quarterly

## KINGS COUNTY:

**CUPA Facility List** 

A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 03/06/2017 Date Data Arrived at EDR: 03/07/2017 Date Made Active in Reports: 05/17/2017 Number of Days to Update: 71 Source: Kings County Department of Public Health Telephone: 559-584-1411 Last EDR Contact: 05/22/2017 Next Scheduled EDR Contact: 09/04/2017 Data Release Frequency: Varies

## LAKE COUNTY:

CUPA Facility List Cupa facility list

> Date of Government Version: 01/18/2017 Date Data Arrived at EDR: 01/20/2017 Date Made Active in Reports: 03/02/2017 Number of Days to Update: 41

Source: Lake County Environmental Health Telephone: 707-263-1164 Last EDR Contact: 04/17/2017 Next Scheduled EDR Contact: 07/31/2017 Data Release Frequency: Varies

#### LASSEN COUNTY:

CUPA Facility List Cupa facility list

> Date of Government Version: 11/30/2016 Date Data Arrived at EDR: 02/03/2017 Date Made Active in Reports: 05/25/2017 Number of Days to Update: 111

Source: Lassen County Environmental Health Telephone: 530-251-8528 Last EDR Contact: 11/30/2017 Next Scheduled EDR Contact: 08/07/2017 Data Release Frequency: Varies

#### LOS ANGELES COUNTY:

#### San Gabriel Valley Areas of Concern San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office. Source: EPA Region 9 Date of Government Version: 03/30/2009 Date Data Arrived at EDR: 03/31/2009 Telephone: 415-972-3178 Date Made Active in Reports: 10/23/2009 Last EDR Contact: 03/20/2017 Next Scheduled EDR Contact: 07/03/2017 Number of Days to Update: 206 Data Release Frequency: No Update Planned HMS: Street Number List Industrial Waste and Underground Storage Tank Sites. Date of Government Version: 11/14/2016 Source: Department of Public Works Date Data Arrived at EDR: 11/18/2016 Telephone: 626-458-3517 Last EDR Contact: 04/10/2017 Date Made Active in Reports: 01/23/2017 Number of Days to Update: 66 Next Scheduled EDR Contact: 07/24/2017 Data Release Frequency: Semi-Annually List of Solid Waste Facilities Solid Waste Facilities in Los Angeles County. Date of Government Version: 04/17/2017 Source: La County Department of Public Works Date Data Arrived at EDR: 04/18/2017 Telephone: 818-458-5185 Date Made Active in Reports: 05/02/2017 Last EDR Contact: 04/18/2017 Number of Days to Update: 14 Next Scheduled EDR Contact: 07/31/2017 Data Release Frequency: Varies City of Los Angeles Landfills Landfills owned and maintained by the City of Los Angeles. Date of Government Version: 01/01/2016 Source: Engineering & Construction Division Date Data Arrived at EDR: 01/26/2016 Telephone: 213-473-7869 Date Made Active in Reports: 03/22/2016 Last EDR Contact: 04/17/2017 Number of Days to Update: 56 Next Scheduled EDR Contact: 07/31/2017 Data Release Frequency: Varies Site Mitigation List Industrial sites that have had some sort of spill or complaint. Date of Government Version: 03/29/2016 Source: Community Health Services Date Data Arrived at EDR: 04/06/2016 Telephone: 323-890-7806 Last EDR Contact: 04/17/2017 Date Made Active in Reports: 06/13/2016 Next Scheduled EDR Contact: 07/31/2017 Number of Days to Update: 68 Data Release Frequency: Annually City of El Segundo Underground Storage Tank Underground storage tank sites located in El Segundo city. Date of Government Version: 01/17/2017 Source: City of El Segundo Fire Department Telephone: 310-524-2236 Date Data Arrived at EDR: 01/18/2017 Date Made Active in Reports: 05/10/2017 Last EDR Contact: 04/17/2017 Next Scheduled EDR Contact: 07/31/2017 Number of Days to Update: 112 Data Release Frequency: Semi-Annually City of Long Beach Underground Storage Tank

Underground storage tank sites located in the city of Long Beach.

Date

Date Date Num

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 04/24/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Annually

## City of Torrance Underground Storage Tank

Underground storage tank sites located in the city of Torrance.

Date of Government Version: 01/10/2017 Date Data Arrived at EDR: 01/13/2017 Date Made Active in Reports: 05/03/2017 Number of Days to Update: 110 Source: City of Torrance Fire Department Telephone: 310-618-2973 Last EDR Contact: 04/10/2017 Next Scheduled EDR Contact: 07/24/2017 Data Release Frequency: Semi-Annually

#### MADERA COUNTY:

#### **CUPA Facility List**

A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 03/03/2017 Date Data Arrived at EDR: 03/07/2017 Date Made Active in Reports: 05/17/2017 Number of Days to Update: 71 Source: Madera County Environmental Health Telephone: 559-675-7823 Last EDR Contact: 05/22/2017 Next Scheduled EDR Contact: 09/04/2017 Data Release Frequency: Varies

## MARIN COUNTY:

Underground Storage Tank Sites Currently permitted USTs in Marin County.

> Date of Government Version: 03/31/2017 Date Data Arrived at EDR: 04/06/2017 Date Made Active in Reports: 05/03/2017 Number of Days to Update: 27

Source: Public Works Department Waste Management Telephone: 415-499-6647 Last EDR Contact: 03/31/2017 Next Scheduled EDR Contact: 07/17/2017 Data Release Frequency: Semi-Annually

### MERCED COUNTY:

#### CUPA Facility List CUPA facility list.

Date of Government Version: 02/22/2017 Date Data Arrived at EDR: 02/23/2017 Date Made Active in Reports: 05/17/2017 Number of Days to Update: 83 Source: Merced County Environmental Health Telephone: 209-381-1094 Last EDR Contact: 06/02/2017 Next Scheduled EDR Contact: 09/04/2017 Data Release Frequency: Varies

#### MONO COUNTY:

#### CUPA Facility List CUPA Facility List

Date of Government Version: 02/21/2017 Date Data Arrived at EDR: 03/02/2017 Date Made Active in Reports: 05/17/2017 Number of Days to Update: 76 Source: Mono County Health Department Telephone: 760-932-5580 Last EDR Contact: 05/24/2017 Next Scheduled EDR Contact: 09/11/2017 Data Release Frequency: Varies

#### MONTEREY COUNTY:

#### **CUPA Facility Listing**

CUPA Program listing from the Environmental Health Division.

Date of Government Version: 06/24/2016	
Date Data Arrived at EDR: 06/27/2016	
Date Made Active in Reports: 08/09/2016	
Number of Days to Update: 43	

Source: Monterey County Health Department Telephone: 831-796-1297 Last EDR Contact: 05/22/2017 Next Scheduled EDR Contact: 09/04/2017 Data Release Frequency: Varies

#### NAPA COUNTY:

Sites With Reported Contamination

A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 01/09/2017 Date Data Arrived at EDR: 01/11/2017 Date Made Active in Reports: 03/02/2017 Number of Days to Update: 50 Source: Napa County Department of Environmental Management Telephone: 707-253-4269 Last EDR Contact: 05/24/2017 Next Scheduled EDR Contact: 09/11/2017 Data Release Frequency: No Update Planned

Closed and Operating Underground Storage Tank Sites Underground storage tank sites located in Napa county.

Date of Government Version: 03/15/2017	Source: Napa County Department of Environmental Management
Date Data Arrived at EDR: 03/16/2017	Telephone: 707-253-4269
Date Made Active in Reports: 05/09/2017	Last EDR Contact: 05/24/2017
Number of Days to Update: 54	Next Scheduled EDR Contact: 09/11/2017
	Data Release Frequency: No Update Planned

### NEVADA COUNTY:

CUPA Facility List

CUPA facility list.

Date of Government Version: 02/09/2017 Date Data Arrived at EDR: 02/10/2017 Date Made Active in Reports: 05/17/2017 Number of Days to Update: 96 Source: Community Development Agency Telephone: 530-265-1467 Last EDR Contact: 05/01/2017 Next Scheduled EDR Contact: 08/14/2017 Data Release Frequency: Varies

## ORANGE COUNTY:

List of Industrial Site Cleanups Petroleum and non-petroleum spills.

> Date of Government Version: 02/06/2017 Date Data Arrived at EDR: 02/10/2017 Date Made Active in Reports: 04/21/2017 Number of Days to Update: 70

Source: Health Care Agency Telephone: 714-834-3446 Last EDR Contact: 05/08/2017 Next Scheduled EDR Contact: 08/21/2017 Data Release Frequency: Annually

## List of Underground Storage Tank Cleanups

Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 11/04/2016 Date Data Arrived at EDR: 11/11/2016 Date Made Active in Reports: 01/23/2017 Number of Days to Update: 73 Source: Health Care Agency Telephone: 714-834-3446 Last EDR Contact: 05/08/2017 Next Scheduled EDR Contact: 08/21/2017 Data Release Frequency: Quarterly

## List of Underground Storage Tank Facilities

Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 02/06/2017 Date Data Arrived at EDR: 02/07/2017 Date Made Active in Reports: 05/03/2017 Number of Days to Update: 85 Source: Health Care Agency Telephone: 714-834-3446 Last EDR Contact: 05/09/2017 Next Scheduled EDR Contact: 08/21/2017 Data Release Frequency: Quarterly

### PLACER COUNTY:

Master List of Facilities

List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 09/02/2016 Date Data Arrived at EDR: 09/06/2016 Date Made Active in Reports: 10/14/2016 Number of Days to Update: 38 Source: Placer County Health and Human Services Telephone: 530-745-2363 Last EDR Contact: 06/02/2017 Next Scheduled EDR Contact: 09/18/2017 Data Release Frequency: Semi-Annually

## PLUMAS COUNTY:

## CUPA Facility List

Plumas County CUPA Program facilities.

Date of Government Version: 01/31/2017 Date Data Arrived at EDR: 02/03/2017 Date Made Active in Reports: 05/25/2017 Number of Days to Update: 111 Source: Plumas County Environmental Health Telephone: 530-283-6355 Last EDR Contact: 06/02/2017 Next Scheduled EDR Contact: 08/07/2017 Data Release Frequency: Varies

#### RIVERSIDE COUNTY:

Listing of Underground Tank Cleanup Sites

Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 04/18/2017 Date Data Arrived at EDR: 04/20/2017 Date Made Active in Reports: 04/21/2017 Number of Days to Update: 1 Source: Department of Environmental Health Telephone: 951-358-5055 Last EDR Contact: 03/20/2017 Next Scheduled EDR Contact: 07/03/2017 Data Release Frequency: Quarterly

#### Underground Storage Tank Tank List

Underground storage tank sites located in Riverside county.

Date of Government Version: 01/19/2017 Date Data Arrived at EDR: 01/25/2017 Date Made Active in Reports: 05/03/2017 Number of Days to Update: 98 Source: Department of Environmental Health Telephone: 951-358-5055 Last EDR Contact: 03/20/2017 Next Scheduled EDR Contact: 07/03/2017 Data Release Frequency: Quarterly

#### SACRAMENTO COUNTY:

#### Toxic Site Clean-Up List

List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 11/07/2016	Source: Sacramento County Environmental Management
Date Data Arrived at EDR: 01/05/2017	Telephone: 916-875-8406
Date Made Active in Reports: 03/02/2017	Last EDR Contact: 04/04/2017
Number of Days to Update: 56	Next Scheduled EDR Contact: 07/17/2017
	Data Release Frequency: Quarterly
Master Hazardous Materials Facility List Any business that has hazardous materials o waste generators.	on site - hazardous material storage sites, underground storage tanks,

Date of Government Version: 11/08/2016 Date Data Arrived at EDR: 01/05/2017 Date Made Active in Reports: 03/02/2017 Number of Days to Update: 56 Source: Sacramento County Environmental Management Telephone: 916-875-8406 Last EDR Contact: 04/04/2017 Next Scheduled EDR Contact: 07/17/2017 Data Release Frequency: Quarterly

## SAN BENITO COUNTY:

## CUPA Facility List

Cupa facility list

Date of Government Version: 11/30/2016 Date Data Arrived at EDR: 02/09/2017 Date Made Active in Reports: 05/25/2017 Number of Days to Update: 105 Source: San Benito County Environmental Health Telephone: N/A Last EDR Contact: 05/05/2017 Next Scheduled EDR Contact: 08/21/2017 Data Release Frequency: Varies

#### SAN BERNARDINO COUNTY:

#### Hazardous Material Permits

This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 12/09/2016Source: San Bernardino County Fire Department Hazardous Materials DivisionDate Data Arrived at EDR: 12/13/2016Telephone: 909-387-3041Date Made Active in Reports: 03/03/2017Last EDR Contact: 05/08/2017Number of Days to Update: 80Next Scheduled EDR Contact: 08/21/2017Data Release Frequency: Quarterly

## SAN DIEGO COUNTY:

#### Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 10/05/2016 Date Data Arrived at EDR: 12/06/2016 Date Made Active in Reports: 03/02/2017 Number of Days to Update: 86 Source: Hazardous Materials Management Division Telephone: 619-338-2268 Last EDR Contact: 06/07/2017 Next Scheduled EDR Contact: 09/18/2017 Data Release Frequency: Quarterly

#### Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 10/31/2015 Date Data Arrived at EDR: 11/07/2015 Date Made Active in Reports: 01/04/2016 Number of Days to Update: 58 Source: Department of Health Services Telephone: 619-338-2209 Last EDR Contact: 04/24/2017 Next Scheduled EDR Contact: 08/07/2017 Data Release Frequency: Varies

#### **Environmental Case Listing**

The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010 Date Data Arrived at EDR: 06/15/2010 Date Made Active in Reports: 07/09/2010 Number of Days to Update: 24 Source: San Diego County Department of Environmental Health Telephone: 619-338-2371 Last EDR Contact: 06/05/2017 Next Scheduled EDR Contact: 09/18/2017 Data Release Frequency: No Update Planned

#### SAN FRANCISCO COUNTY:

#### Local Oversite Facilities

A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008	Source: Department Of Public Health San Francisco County
Date Data Arrived at EDR: 09/19/2008	Telephone: 415-252-3920
Date Made Active in Reports: 09/29/2008	Last EDR Contact: 05/05/2017
Number of Days to Update: 10	Next Scheduled EDR Contact: 08/21/2017
	Data Release Frequency: Quarterly

#### Underground Storage Tank Information

Underground storage tank sites located in San Francisco county.

Date of Government Version: 02/28/2017	Source: Department of Public Health
Date Data Arrived at EDR: 03/02/2017	Telephone: 415-252-3920
Date Made Active in Reports: 05/03/2017	Last EDR Contact: 05/05/2017
Number of Days to Update: 62	Next Scheduled EDR Contact: 08/21/2017
	Data Release Frequency: Quarterly

### SAN JOAQUIN COUNTY:

## San Joaquin Co. UST

A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 03/21/2017 Date Data Arrived at EDR: 03/23/2017 Date Made Active in Reports: 05/09/2017 Number of Days to Update: 47 Source: Environmental Health Department Telephone: N/A Last EDR Contact: 03/20/2017 Next Scheduled EDR Contact: 07/03/2017 Data Release Frequency: Semi-Annually

#### SAN LUIS OBISPO COUNTY:

## CUPA Facility List

Cupa Facility List.

Date of Government Version: 02/21/2017 Date Data Arrived at EDR: 02/21/2017 Date Made Active in Reports: 05/23/2017 Number of Days to Update: 91 Source: San Luis Obispo County Public Health Department Telephone: 805-781-5596 Last EDR Contact: 06/02/2017 Next Scheduled EDR Contact: 09/04/2017 Data Release Frequency: Varies

#### SAN MATEO COUNTY:

#### **Business Inventory**

List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 03/15/2017 Date Data Arrived at EDR: 04/07/2017 Date Made Active in Reports: 05/10/2017 Number of Days to Update: 33 Source: San Mateo County Environmental Health Services Division Telephone: 650-363-1921 Last EDR Contact: 06/09/2017 Next Scheduled EDR Contact: 09/25/2017 Data Release Frequency: Annually

## Fuel Leak List

A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 03/15/2017Source: San Mateo County Environmental Health Services DivisionDate Data Arrived at EDR: 04/07/2017Telephone: 650-363-1921Date Made Active in Reports: 04/21/2017Last EDR Contact: 06/09/2017Number of Days to Update: 14Next Scheduled EDR Contact: 09/25/2017Data Release Frequency: Semi-Annually

#### SANTA BARBARA COUNTY:

#### CUPA Facility Listing

CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011	Source: Santa Barbara County Public Health Department
Date Data Arrived at EDR: 09/09/2011	Telephone: 805-686-8167
Date Made Active in Reports: 10/07/2011	Last EDR Contact: 05/22/2017
Number of Days to Update: 28	Next Scheduled EDR Contact: 09/04/2017
	Data Release Frequency: Varies

#### SANTA CLARA COUNTY:

Cupa Facility List

Cupa facility list

Date of Government Version: 02/22/2017 Date Data Arrived at EDR: 02/23/2017 Date Made Active in Reports: 05/23/2017 Number of Days to Update: 89

Source: Department of Environmental Health Telephone: 408-918-1973 Last EDR Contact: 05/22/2017 Next Scheduled EDR Contact: 09/04/2017 Data Release Frequency: Varies

### HIST LUST - Fuel Leak Site Activity Report

A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005 Date Data Arrived at EDR: 03/30/2005 Date Made Active in Reports: 04/21/2005 Number of Days to Update: 22 Source: Santa Clara Valley Water District Telephone: 408-265-2600 Last EDR Contact: 03/23/2009 Next Scheduled EDR Contact: 06/22/2009 Data Release Frequency: No Update Planned

## LOP Listing

A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014 Date Data Arrived at EDR: 03/05/2014 Date Made Active in Reports: 03/18/2014 Number of Days to Update: 13 Source: Department of Environmental Health Telephone: 408-918-3417 Last EDR Contact: 05/24/2017 Next Scheduled EDR Contact: 09/11/2017 Data Release Frequency: Annually

## Hazardous Material Facilities

Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 11/07/2016 Date Data Arrived at EDR: 11/10/2016 Date Made Active in Reports: 01/24/2017 Number of Days to Update: 75 Source: City of San Jose Fire Department Telephone: 408-535-7694 Last EDR Contact: 05/05/2017 Next Scheduled EDR Contact: 08/21/2017 Data Release Frequency: Annually

## SANTA CRUZ COUNTY:

## CUPA Facility List

CUPA facility listing.

Date of Government Version: 01/21/2017 Date Data Arrived at EDR: 02/22/2017 Date Made Active in Reports: 05/23/2017 Number of Days to Update: 90 Source: Santa Cruz County Environmental Health Telephone: 831-464-2761 Last EDR Contact: 05/22/2017 Next Scheduled EDR Contact: 09/04/2017 Data Release Frequency: Varies

## SHASTA COUNTY:

## CUPA Facility List

Cupa Facility List.

Date of Government Version: 03/14/2017 Date Data Arrived at EDR: 03/17/2017 Date Made Active in Reports: 05/23/2017 Number of Days to Update: 67 Source: Shasta County Department of Resource Management Telephone: 530-225-5789 Last EDR Contact: 05/22/2017 Next Scheduled EDR Contact: 09/04/2017 Data Release Frequency: Varies

### SOLANO COUNTY:

Leaking Underground Storage Tanks

A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 11/29/2016 Date Data Arrived at EDR: 12/21/2016 Date Made Active in Reports: 12/22/2016 Number of Days to Update: 1 Source: Solano County Department of Environmental Management Telephone: 707-784-6770 Last EDR Contact: 06/09/2017 Next Scheduled EDR Contact: 09/25/2017 Data Release Frequency: Quarterly

### Underground Storage Tanks

Underground storage tank sites located in Solano county.

Date of Government Version: 03/15/2017 Date Data Arrived at EDR: 03/17/2017 Date Made Active in Reports: 05/03/2017 Number of Days to Update: 47 Source: Solano County Department of Environmental Management Telephone: 707-784-6770 Last EDR Contact: 06/09/2017 Next Scheduled EDR Contact: 09/25/2017 Data Release Frequency: Quarterly

SONOMA COUNTY:

Cupa Facility List Cupa Facility list

Date of Government Version: 03/01/2 Date Data Arrived at EDR: 03/30/20 Date Made Active in Reports: 05/23/ Number of Days to Update: 54	<ul> <li>Source: County of Sonoma Fire &amp; Emergency Services Department</li> <li>Telephone: 707-565-1174</li> <li>Last EDR Contact: 03/27/2017</li> <li>Next Scheduled EDR Contact: 07/10/2017</li> <li>Data Release Frequency: Varies</li> </ul>
Leaking Underground Storage Tank Sites A listing of leaking underground stora	age tank sites located in Sonoma county.
Date of Government Version: 01/04/ Date Data Arrived at EDR: 01/06/20 Date Made Active in Reports: 03/02/ Number of Days to Update: 55	<ul> <li>2017 Source: Department of Health Services</li> <li>17 Telephone: 707-565-6565</li> <li>2017 Last EDR Contact: 03/27/2017</li> <li>Next Scheduled EDR Contact: 07/10/2017</li> <li>Data Release Frequency: Quarterly</li> </ul>
STANISLAUS COUNTY:	
CUPA Facility List Cupa facility list	
Date of Government Version: 01/20/ Date Data Arrived at EDR: 01/24/20 Date Made Active in Reports: 05/18/ Number of Days to Update: 114	<ul> <li>Source: Stanislaus County Department of Ennvironmental Protection</li> <li>Telephone: 209-525-6751</li> <li>Last EDR Contact: 11/30/2017</li> <li>Next Scheduled EDR Contact: 07/31/2017</li> <li>Data Release Frequency: Varies</li> </ul>
SUTTER COUNTY:	
Underground Storage Tanks Underground storage tank sites loca	ted in Sutter county.
Date of Government Version: 12/02/2 Date Data Arrived at EDR: 12/06/20 Date Made Active in Reports: 01/10/ Number of Days to Update: 35	2016       Source: Sutter County Department of Agriculture         16       Telephone: 530-822-7500         2017       Last EDR Contact: 06/02/2017         Next Scheduled EDR Contact: 09/18/2017         Data Release Frequency: Semi-Annually
TEHAMA COUNTY:	
CUPA Facility List Cupa facilities	
Date of Government Version: 01/05/ Date Data Arrived at EDR: 02/10/20 Date Made Active in Reports: 05/25/ Number of Days to Update: 104	<ul> <li>2017 Source: Tehama County Department of Environmental Health</li> <li>17 Telephone: 530-527-8020</li> <li>2017 Last EDR Contact: 05/05/2017</li> <li>Next Scheduled EDR Contact: 08/21/2017</li> <li>Data Release Frequency: Varies</li> </ul>
TRINITY COUNTY:	
CUPA Facility List Cupa facility list	
Date of Government Version: 01/23/ Date Data Arrived at EDR: 01/25/20 Date Made Active in Reports: 05/18/ Number of Days to Update: 113	<ul> <li>2017 Source: Department of Toxic Substances Control</li> <li>17 Telephone: 760-352-0381</li> <li>2017 Last EDR Contact: 04/24/2017</li> <li>Next Scheduled EDR Contact: 08/07/2017</li> <li>Data Release Frequency: Varies</li> </ul>
TULARE COUNTY:	

### CUPA Facility List

#### Cupa program facilities

Date of Government Version: 01/05/2017 Date Data Arrived at EDR: 02/10/2017 Date Made Active in Reports: 05/25/2017 Number of Days to Update: 104 Source: Tulare County Environmental Health Services Division Telephone: 559-624-7400 Last EDR Contact: 06/02/2017 Next Scheduled EDR Contact: 08/21/2017 Data Release Frequency: Varies

#### TUOLUMNE COUNTY:

#### CUPA Facility List Cupa facility list

Date of Government Version: 01/25/2017 Date Data Arrived at EDR: 01/27/2017 Date Made Active in Reports: 03/02/2017 Number of Days to Update: 34

Source: Divison of Environmental Health Telephone: 209-533-5633 Last EDR Contact: 04/24/2017 Next Scheduled EDR Contact: 08/07/2017 Data Release Frequency: Varies

## VENTURA COUNTY:

Business Plan, Hazardous Waste Producers, and Operating Underground Tanks The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 12/27/2016	Source: Ventura County Environmental Health Division
Date Data Arrived at EDR: 01/27/2017	Telephone: 805-654-2813
Date Made Active in Reports: 05/10/2017	Last EDR Contact: 04/24/2017
Number of Days to Update: 103	Next Scheduled EDR Contact: 08/07/2017
	Data Release Frequency: Quarterly

Inventory of Illegal Abandoned and Inactive Sites

Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011	Source: Environmental Health Division
Date Data Arrived at EDR: 12/01/2011	Telephone: 805-654-2813
Date Made Active in Reports: 01/19/2012	Last EDR Contact: 03/31/2017
Number of Days to Update: 49	Next Scheduled EDR Contact: 07/17/2017
	Data Release Frequency: Annually

Listing of Underground Tank Cleanup Sites

Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008	Source: Environmental Health Division
Date Data Arrived at EDR: 06/24/2008	Telephone: 805-654-2813
Date Made Active in Reports: 07/31/2008	Last EDR Contact: 05/15/2017
Number of Days to Update: 37	Next Scheduled EDR Contact: 08/28/2017
	Data Release Frequency: Quarterly

## Medical Waste Program List

To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 09/26/2016	Source: Ventura County Resource Management Agency
Date Data Arrived at EDR: 10/27/2016	Telephone: 805-654-2813
Date Made Active in Reports: 01/24/2017	Last EDR Contact: 04/24/2017
Number of Days to Update: 89	Next Scheduled EDR Contact: 08/07/2017
	Data Release Frequency: Quarterly

## Underground Tank Closed Sites List

Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 02/27/2017 Date Data Arrived at EDR: 03/15/2017 Date Made Active in Reports: 05/03/2017 Number of Days to Update: 49 Source: Environmental Health Division Telephone: 805-654-2813 Last EDR Contact: 03/15/2017 Next Scheduled EDR Contact: 06/26/2017 Data Release Frequency: Quarterly

#### YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report Underground storage tank sites located in Yolo county.

Date of Government Version: 03/31/2017 Date Data Arrived at EDR: 04/06/2017 Date Made Active in Reports: 05/03/2017 Number of Days to Update: 27 Source: Yolo County Department of Health Telephone: 530-666-8646 Last EDR Contact: 03/31/2017 Next Scheduled EDR Contact: 07/17/2017 Data Release Frequency: Annually

## YUBA COUNTY:

CUPA Facility List

CUPA facility listing for Yuba County.

Date of Government Version: 01/30/2017 Date Data Arrived at EDR: 01/31/2017 Date Made Active in Reports: 05/23/2017 Number of Days to Update: 112 Source: Yuba County Environmental Health Department Telephone: 530-749-7523 Last EDR Contact: 05/01/2017 Next Scheduled EDR Contact: 08/14/2017 Data Release Frequency: Varies

## **OTHER DATABASE(S)**

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 07/30/2013	Source: Department of Energy & Environmental Protection
Date Data Arrived at EDR: 08/19/2013	Telephone: 860-424-3375
Date Made Active in Reports: 10/03/2013	Last EDR Contact: 05/15/2017
Number of Days to Update: 45	Next Scheduled EDR Contact: 08/28/2017
	Data Release Frequency: No Update Planned
NJ MANIFEST: Manifest Information	

Date of Government Version: 12/31/2015 Date Data Arrived at EDR: 09/29/2016 Date Made Active in Reports: 01/03/2017 Number of Days to Update: 96

Hazardous waste manifest information.

Source: Department of Environmental Protection Telephone: N/A Last EDR Contact: 04/11/2017 Next Scheduled EDR Contact: 07/24/2017 Data Release Frequency: Annually

#### NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/30/2017 Date Data Arrived at EDR: 02/01/2017 Date Made Active in Reports: 02/13/2017 Number of Days to Update: 12

PA MANIFEST: Manifest Information Hazardous waste manifest information.

> Date of Government Version: 12/31/2015 Date Data Arrived at EDR: 07/22/2016 Date Made Active in Reports: 11/22/2016 Number of Days to Update: 123

RI MANIFEST: Manifest information Hazardous waste manifest information

> Date of Government Version: 12/31/2013 Date Data Arrived at EDR: 06/19/2015 Date Made Active in Reports: 07/15/2015 Number of Days to Update: 26

WI MANIFEST: Manifest Information

Hazardous waste manifest information. Date of Government Version: 12/31/2015

Date Data Arrived at EDR: 04/14/2016 Date Made Active in Reports: 06/03/2016 Number of Days to Update: 50 Source: Department of Environmental Conservation Telephone: 518-402-8651 Last EDR Contact: 05/03/2017 Next Scheduled EDR Contact: 08/14/2017 Data Release Frequency: Annually

Source: Department of Environmental Protection Telephone: 717-783-8990 Last EDR Contact: 04/18/2017 Next Scheduled EDR Contact: 07/31/2017 Data Release Frequency: Annually

Source: Department of Environmental Management Telephone: 401-222-2797 Last EDR Contact: 05/22/2017 Next Scheduled EDR Contact: 09/04/2017 Data Release Frequency: Annually

Source: Department of Natural Resources Telephone: N/A Last EDR Contact: 03/13/2017 Next Scheduled EDR Contact: 06/26/2017 Data Release Frequency: Annually

## **Oil/Gas Pipelines**

Source: PennWell Corporation

Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

#### Electric Power Transmission Line Data

#### Source: PennWell Corporation

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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

#### AHA Hospitals:

Source: American Hospital Association, Inc.

Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services

Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services,

a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes Source: National Institutes of Health Telephone: 301-594-6248 Information on Medicare and Medicaid certified nursing homes in the United States. **Public Schools** Source: National Center for Education Statistics Telephone: 202-502-7300 The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states. **Private Schools** Source: National Center for Education Statistics Telephone: 202-502-7300 The National Center for Education Statistics' primary database on private school locations in the United States. **Daycare Centers: Licensed Facilities** Source: Department of Social Services Telephone: 916-657-4041

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA Telephone: 877-336-2627 Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory Source: Department of Fish & Game Telephone: 916-445-0411

Current USGS 7.5 Minute Topographic Map Source: U.S. Geological Survey

### STREET AND ADDRESS INFORMATION

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## **GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM**

### TARGET PROPERTY ADDRESS

119/121 S. SOTO STREET & 2316/2324 1ST ST. PHASE 1 119 SOUTH SOTO STREET LOS ANGELES, CA 90033

## TARGET PROPERTY COORDINATES

Latitude (North):	34.0434 - 34° 2' 36.24''
Longitude (West):	118.210496 - 118° 12' 37.79"
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	388264.6
UTM Y (Meters):	3767434.2
Elevation:	302 ft. above sea level

## USGS TOPOGRAPHIC MAP

Target Property Map:	5630795 LOS ANGELES, CA
Version Date:	2012

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principal investigative components:

- 1. Groundwater flow direction, and
- 2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

## **GROUNDWATER FLOW DIRECTION INFORMATION**

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

## TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

## TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General WSW

## SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

## HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

#### FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
06037C1637F	FEMA FIRM Flood data
Additional Panels in search area:	FEMA Source Type
06037C1636F 06037C1638F 06037C1639F	FEMA FIRM Flood data FEMA FIRM Flood data FEMA FIRM Flood data
NATIONAL WETLAND INVENTORY	
	NWI Electronic
NWI Quad at Target Property	Data Coverage
LOS ANGELES	YES - refer to the Overview Map and Detail Map

### HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:		
Search Radius:	1.25 miles	
Status:	Not found	

## **AQUIFLOW**®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

LOCATION	GENERAL DIRECTION
FROM TP	GROUNDWATER FLOW
1/2 - 1 Mile WSW	SW
1/2 - 1 Mile NW	SW
1/2 - 1 Mile NW	Not Reported
1/2 - 1 Mile NNE	W
1/2 - 1 Mile NNE	Not Reported
1/2 - 1 Mile NNE	Not Reported
	LOCATION <u>FROM TP</u> 1/2 - 1 Mile WSW 1/2 - 1 Mile NW 1/2 - 1 Mile NW 1/2 - 1 Mile NNE 1/2 - 1 Mile NNE 1/2 - 1 Mile NNE

For additional site information, refer to Physical Setting Source Map Findings.

## **GROUNDWATER FLOW VELOCITY INFORMATION**

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

## **GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY**

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

## **ROCK STRATIGRAPHIC UNIT**

### **GEOLOGIC AGE IDENTIFICATION**

Era:	Cenozoic	Category:	Stratifed Sequence
System:	Quaternary	0,	·
Series:	Quaternary		
Code:	Q (decoded above as Era, System	& Series)	

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

## DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name:	HAMBRIGHT
Soil Surface Texture:	gravelly - loam
Hydrologic Group:	Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.
Soil Drainage Class:	Well drained. Soils have intermediate water holding capacity. Depth to water table is more than 6 feet.
Hydric Status: Soil does not meet the	requirements for a hydric soil.
Corrosion Potential - Uncoated Steel:	MODERATE
Depth to Bedrock Min:	> 10 inches

Depth to Bedrock Max:	> 20 inches

Soil Layer Information							
	Bou	ndary		Classi	ication		
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	7 inches	gravelly - loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Gravels, Gravels with fines, Silty Gravel	Max: 2.00 Min: 0.60	Max: 7.30 Min: 6.10
2	7 inches	16 inches	very gravelly - loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Gravels, Gravels with fines, Silty Gravel. COARSE-GRAINED SOILS, Gravels, Gravels with fines, Clayey Gravel.	Max: 2.00 Min: 0.60	Max: 7.30 Min: 6.10
3	16 inches	20 inches	unweathered bedrock	Not reported	Not reported	Max: 0.00 Min: 0.00	Max: 0.00 Min: 0.00

## OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures:	loam silty clay loam shaly - clay loam sandy loam clay loamy sand clay loam
Surficial Soil Types:	loam silty clay loam shaly - clay loam sandy loam clay loamy sand clay loam
Shallow Soil Types:	silty clay
Deeper Soil Types:	weathered bedrock clay loam

## LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

## WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 0.001 miles
State Database	1.000

## FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

## FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

		LOCATION
MAP ID	WELL ID	FROM TP

No PWS System Found

Note: PWS System location is not always the same as well location.

### STATE DATABASE WELL INFORMATION

		LOCATION
MAP ID	WELL ID	FROM TP
No Wells Found		

## **OTHER STATE DATABASE INFORMATION**

#### STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A1	CAOG11000201102	1/4 - 1/2 Mile SW
A2	CAOG11000201101	1/4 - 1/2 Mile SW
A3	CAOG11000201099	1/4 - 1/2 Mile SW
B4	CAOG11000214589	1/4 - 1/2 Mile NNE
B5	CAOG11000214607	1/4 - 1/2 Mile NNE
6	CAOG11000201098	1/2 - 1 Mile ESE
7	CAOG11000204482	1/2 - 1 Mile SSE
8	CAOG11000214062	1/2 - 1 Mile NNW
9	CAOG11000204511	1/2 - 1 Mile North
10	CAOG11000214189	1/2 - 1 Mile NNE
11	CAOG11000200864	1/2 - 1 Mile WNW
12	CAOG11000214397	1/2 - 1 Mile NNE
13	CAOG11000205253	1/2 - 1 Mile West
C14	CAOG11000205186	1/2 - 1 Mile NW

## STATE OIL/GAS WELL INFORMATION

MAP ID C15 WELL ID CAOG11000204699 LOCATION FROM TP 1/2 - 1 Mile NW

## **PHYSICAL SETTING SOURCE MAP - 4967023.2s** THE POOMENS SHERIEE ENTRAN 5 USC/UNIVERSITY HOSPITAL HELIPORT LOS ANGELES COUNTY/USC MEDICAL CENTER Mallan, - Kalendar SPRR W Mission Bu JAKEDPHEN HOOPER HEATORIAL Margno 0 0 4 E Cessore Charles Wabash Ave 2 1 <u>S Santa Fe Ave</u> 3 ndiana ŝ St 3600 \$ -S Indlana お書書 974 CA So Ο 1/4 1/2 1 Miles County Boundary N Major Roads Groundwater Flow Direction ¥ Contour Lines GI) Indeterminate Groundwater Flow at Location Earthquake Fault Lines Ħ GV Groundwater Flow Varies at Location × Airports (HD) Closest Hydrogeological Data Earthquake epicenter, Richter 5 or greater $\bigcirc$ Oil, gas or related wells $\bigotimes$ Water Wells Ø Public Water Supply Wells Cluster of Multiple Icons

SITE NAME: ADDRESS: LAT/LONG:	119/121 S. Soto Street & 2316/2324 1st St. Phase 1 119 South Soto Street Los Angeles CA 90033 34.0434 / 118.210496	CLIENT: CONTACT: INQUIRY #: DATE:	Geocon Geotechnical & Env Mike Akoto 4967023.2s June 14, 2017 9:45 pm
	Copyright © 2017 EDR, Inc. © 2015 TomTom Rel. 2015.		

## **GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS**

Map ID Direction Distance Elevation			Database	EDR ID Number
1 WSW 1/2 - 1 Mile Lower	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	900330161 SW 25 25 Not Reported 09/19/1996	AQUIFLOW	38082
A2 NW 1/2 - 1 Mile Higher	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	900330189 SW 25.59 30.09 Not Reported 05/26/1993	AQUIFLOW	38076
A3 NW 1/2 - 1 Mile Higher	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	900330225 Not Reported 40 50 Not Reported 11/19/1997	AQUIFLOW	38178
B4 NNE 1/2 - 1 Mile Higher	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	900330234 W Not Reported Not Reported 20.1 11/04/1996	AQUIFLOW	69670
B5 NNE 1/2 - 1 Mile Higher	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	900330152 Not Reported 25 32 Not Reported 10/23/1990	AQUIFLOW	38063
B6 NNE 1/2 - 1 Mile Higher	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	900570061 Not Reported 8.37 12 Not Reported 08/07/1996	AQUIFLOW	55186

## **GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS**

Map	ID
Direc	tion
Dista	nce

EDR ID Number Database

W /4 - 1/2 Mile			OIL_GAS	CAOG1100020110
District nun:	1	Api number:	03701153	
Blm well:	Ν	Redrill can:	Not Reported	
Dryhole:	Ν	Well status:	P	
Operator name:	Atlantic Richfield Company			
County name:	Los Angeles	Fieldname:	Boyle Heights (ABD)	
Area name:	Any Area	Section:	36	
Township:	015	Range:	13W	
Base meridian:	SB	Elevation:	Not Reported	
Locationde:	Not Reported			
Gissourcec:	hud			
Comments:	Not Reported			
Leasename:	Industrial Community	Wellnumber:	1A-5	
Epawell:	N	Hydraulica:	N	
Confidenti:	Ν	Spuddate:	Not Reported	
Welldeptha:	0	·		
Redrillfoo:	0			
Abandonedd:	Not Reported	Completion:	Not Reported	
Directiona:	Directionally drilled	Gissymbol:	POG	
Site id:	CAOG11000201102	5		

A S 1

A2 SW 1/4 - 1/2 Mile			OIL_GAS	CAOG11000201101
District nun:	1	Api number:	03701152	
Blm well:	Ν	Redrill can:	Not Reported	
Dryhole:	Ν	Well status:	Р	
Operator name:	Atlantic Richfield Company			
County name:	Los Angeles	Fieldname:	Boyle Heights (ABD)	
Area name:	Any Area	Section:	35	
Township:	01S	Range:	13W	
Base meridian:	SB	Elevation:	Not Reported	
Locationde:	Not Reported			
Gissourcec:	hud			
Comments:	Not Reported			
Leasename:	Industrial Community	Wellnumber:	1-4	
Epawell:	Ν	Hydraulica:	N	
Confidenti:	Ν	Spuddate:	Not Reported	
Welldeptha:	0			
Redrillfoo:	0			
Abandonedd:	Not Reported	Completion:	Not Reported	
Directiona:	Directionally drilled	Gissymbol:	POG	
Site id:	CAOG11000201101	-		

OIL\_GAS CAOG11000201099

## **GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS**

District pup:	1	Aninumbor	02701125
District nun.	l N	Aprillioner.	US/UTI25
Bim well:	IN	Rednii can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Boyle Heights (ABD)
Area name:	Any Area	Section:	35
Township:	01S	Range:	13W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Industrial Community	Wellnumber:	1-1
Epawell:	Ν	Hydraulica:	Ν
Confidenti:	Ν	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Directionally drilled	Gissymbol:	POG
Site id:	CAOG11000201099	-	

#### B4 NNE 1/4 - 1/2 Mile

District nun: Blm well: Dryhole: Operator name: County name: Area name: Township: Base meridian: Locationde: Gissourcec: Comments: Leasename: Epawell: Confidenti: Welldeptha: Redrillfoo: Abandonedd: Directiona: Site id:

#### Ν Υ Chevron U.S.A. Inc. Los Angeles Any Area 01S SB Not Reported hud Not Reported Not Reported Ν Ν 0 0 Not Reported Unknown CAOG11000214589

1

Api number: Redrill can: Well status: Fieldname: Section: Rance:

Range: Elevation:

Wellnumber: Hydraulica: Spuddate:

Completion: Gissymbol: OIL\_GAS

CAOG11000214589

CAOG11000214607

03721137 Not Reported P

Any Field 26 13W Not Reported

BEW-1 N Not Reported

Not Reported PDH

PH

B5 NNE 1/4 - 1/2 Mile

> District nun: Blm well: Dryhole: Operator name: County name: Area name: Township: Base meridian: Locationde: Gissourcec:

### N Y Chevron U.S.A. Inc. Los Angeles Any Area 01S SB Not Reported hud

1

Api number: Redrill can: Well status:

Fieldname: Section: Range: Elevation: OIL\_GAS

03721163 Not Reported

Any Field 26 13W Not Reported

Ρ
Comments: Leasename: Epawell: Confidenti: Welldeptha: Redrillfoo: Abandonedd: Directiona: Site id:

Not Reported Not Reported Ν Ν 0 0 Not Reported Unknown CAOG11000214607

1

1

Wellnumber: Hydraulica: Spuddate:

Completion: Gissymbol:

BEW-2 Ν Not Reported

Not Reported PDH

#### 6 ESE 1/2 - 1 Mile

District nun: Blm well: Dryhole: Operator name: County name: Area name: Township: Base meridian: Locationde: Gissourcec: Comments: Leasename: Epawell: Confidenti: Welldeptha: Redrillfoo: Abandonedd: Directiona: Site id:

#### Ν Ν Atlantic Richfield Company Los Angeles Any Area 01S SB Not Reported hud Not Reported Evergreen Ν Ν 0 0 Not Reported Directionally drilled CAOG11000201098

Api number: Redrill can: Well status:

Fieldname: Section: Range: Elevation:

Wellnumber: Hydraulica: Spuddate:

Completion: Gissymbol:

Api number:

OIL\_GAS

#### CAOG11000201098

03701124 Not Reported Ρ

Boyle Heights (ABD) 36 13W Not Reported

1 Ν Not Reported

Not Reported PDH

## 7 SSE 1/2 - 1 Mile

District nun: Blm well:

Dryhole: Operator name: County name: Area name: Township: Base meridian: Locationde: Gissourcec: Comments: Leasename: Epawell: Confidenti: Welldeptha: Redrillfoo: Abandonedd: Directiona: Site id:

#### Ν Redrill can: Υ Well status: Atlantic Richfield Company Los Angeles Fieldname: Any Area Section: 01S Range: SB Elevation: Not Reported hud Not Reported **Boyle Community** Wellnumber: Ν Hydraulica: Ν Spuddate: 0 0 Not Reported Completion: Directionally drilled Gissymbol: CAOG11000204482

OIL\_GAS

#### CAOG11000204482

03705151 Not Reported Ρ

Any Field 35 15W Not Reported

17-1 Ν Not Reported

Not Reported PDH

Map ID	
Directio	n
Distance	е

Database EDR ID Number

8 NNW 1/2 - 1 Mile			OIL_GAS	CAOG11000214062
District nun:	1	Api number:	03720373	
Blm well:	Ν	Redrill can:	Not Reported	
Dryhole:	Y	Well status:	Р	
Operator name:	Chevron U.S.A. Inc.			
County name:	Los Angeles	Fieldname:	Any Field	
Area name:	Any Area	Section:	26	
Township:	01S	Range:	13W	
Base meridian:	SB	Elevation:	Not Reported	
Locationde:	Not Reported			
Gissourcec:	hud			
Comments:	Not Reported			
Leasename:	Seventh Day Adventist Ch	urch C Wellnumber:	1	
Epawell:	N	Hydraulica:	Ν	
Confidenti:	Ν	Spuddate:	Not Reported	
Welldeptha:	0			
Redrillfoo:	0			
Abandonedd:	Not Reported	Completion:	Not Reported	
Directiona:	Directionally drilled	Gissymbol:	PDH	
Site id:	CAOG11000214062	-		

9 North 1/2 - 1 Mile			OIL_GAS	CAOG11000204511
District nun:	1	Api number:	03705189	
Blm well:	Ν	Redrill can:	Not Reported	
Dryhole:	Ν	Well status:	1	
Operator name:	C. Bell			
County name:	Los Angeles	Fieldname:	Any Field	
Area name:	Any Area	Section:	25	
Township:	01\$	Range:	13W	
Base meridian:	SB	Elevation:	Not Reported	
Locationde:	Not Reported		·	
Gissourcec:	hud			
Comments:	Not Reported			
Leasename:	Not Reported	Wellnumber:	1	
Epawell:	N	Hydraulica:	Ν	
Confidenti:	Ν	Spuddate:	Not Reported	
Welldeptha:	0			
Redrillfoo:	0			
Abandonedd:	Not Reported	Completion:	Not Reported	
Directiona:	Unknown	Gissymbol:	AOG	
Site id:	CAOG11000204511			

10 NNE 1/2 - 1 Mile

OIL\_GAS CAOG11000214189

District nun:	1	Api number:	03720702	
Blm well:	Ν	Redrill can:	Not Reported	
Dryhole:	Y	Well status:	P	
Operator name:	Chevron U.S.A. Inc.			
County name:	Los Angeles	Fieldname:	Any Field	
Area name:	Any Area	Section:	25	
Township:	01S	Range:	13W	
Base meridian:	SB	Elevation:	Not Reported	
Locationde:	Not Reported			
Gissourcec:	hud			
Comments:	Not Reported			
Leasename:	Friend Corehole	Wellnumber:	1	
Epawell:	Ν	Hydraulica:	Ν	
Confidenti:	Ν	Spuddate:	Not Reported	
Welldeptha:	0			
Redrillfoo:	0			
Abandonedd:	Not Reported	Completion:	Not Reported	
Directiona:	Unknown	Gissymbol:	PDH	
Site id:	CAOG11000214189	-		

#### 11 WNW 1/2 - 1 Mile

Api number: 03700508 District nun: 1 Blm well: Ν Redrill can: Not Reported Dryhole: Υ Well status: Ρ Operator name: Chevron U.S.A. Inc. County name: Los Angeles Fieldname: Any Field Area name: Any Area Section: 34 13W 01S Township: Range: Base meridian: SB Elevation: Not Reported Locationde: Not Reported Gissourcec: hud Not Reported Comments: Dept. Of Recreation/Parks Core Wellnumber: 2 Leasename: Hydraulica: Epawell: Ν Ν Spuddate: Confidenti: Ν Not Reported Welldeptha: 0 Redrillfoo: 0 Not Reported Abandonedd: Not Reported Completion: Gissymbol: Directiona: Unknown PDH Site id: CAOG11000200864

#### 12 NNE 1/2 - 1 Mile

District nun: Blm well: Dryhole: Operator name: County name: Area name: Township: Base meridian: Locationde: Gissourcec:

#### N N Chevron U.S.A. Inc. Los Angeles Any Area 01S SB Not Reported hud

1

Api number: Redrill can: Well status:

Fieldname: Section: Range: Elevation: OIL\_GAS

OIL\_GAS

CAOG11000214397

CAOG11000200864

03721740 Not Reported P

Any Field 25 13W Not Reported

Comments: Leasename: Epawell: Confidenti: Welldeptha: Redrillfoo: Abandonedd: Directiona: Site id: Not Reported Blanchard N N 0 0 Not Reported Unknown CAOG11000214397

Wellnumber: Hydraulica: Spuddate:

Completion: Gissymbol: 3 N Not Reported

Not Reported POG

#### 13 West 1/2 - 1 Mile

District nun: Blm well: Dryhole: Operator name: County name: Area name: Township: Base meridian: Locationde: Gissourcec: Comments: Leasename: Epawell: Confidenti: Welldeptha: Redrillfoo: Abandonedd: Directiona: Site id:

#### 1 N Y Industrial Royalties Co. Los Angeles Any Area 01S SB Not Reported hud Not Reported Core Hole N

0

0

Not Reported

CAOG11000205253

Unknown

Api number: Redrill can: Well status:

Fieldname: Section: Range: Elevation:

Wellnumber: Hydraulica: Spuddate:

Completion: Gissymbol: OIL\_GAS

CAOG11000205253

03706327 Not Reported P

Any Field 34 13W Not Reported

1 N Not Reported

Not Reported PDH

#### C14 NW 1/2 - 1 Mile

Api number: District nun: 1 Blm well: Ν Redrill can: Dryhole: Ν Well status: А Operator name: Ventura Oil syndicate #1 County name: Los Angeles Fieldname: Any Area Area name: Section: 26 01S Township: Range: Base meridian: SB Elevation: Not Reported Locationde: Gissourcec: hud Comments: Not Reported Not Reported Wellnumber: Leasename: 1 Epawell: Ν Hydraulica: Ν Confidenti: Ν Spuddate: Welldeptha: 0 Redrillfoo: 0 Abandonedd: Not Reported Completion: Directiona: Unknown Gissymbol: CAOG11000205186 Site id:

#### OIL\_GAS CAOG11000205186

03706212 Not Reported A

Any Field 26 13W Not Reported

1 N Not Reported

Not Reported AOG

Map ID Direction Distance			Database	EDR ID Number
C15 NW 1/2 - 1 Mile			OIL_GAS	CAOG11000204699
District pup:	1	Ani numbor	03705474	
Blm well	I N	Redrill can:	Not Reported	
Dryhole:	N	Well status:	B	
Operator name:	Joseph L. Herron	Wen status.	B	
County name:	Los Angeles	Fieldname <sup>.</sup>	Any Field	
Area name:	Any Area	Section:	26	
Township:	015	Range:	13W	
Base meridian:	SB	Elevation:	Not Reported	
Locationde:	Not Reported			
Gissourcec:	hud			
Comments:	Not Reported			
Leasename:	Not Reported	Wellnumber:	1	
Epawell:	N	Hydraulica:	N	
Confidenti:	Ν	Spuddate:	Not Reported	
Welldeptha:	0	·		
Redrillfoo:	0			
Abandonedd:	Not Reported	Completion:	Not Reported	

Gissymbol:

Directiona:

Site id:

Unknown

CAOG11000204699

AOG

### AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
90033	4	0

Federal EPA Radon Zone for LOS ANGELES County: 2

Note: Zone 1 indoor average level > 4 pCi/L. : Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L. : Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for LOS ANGELES COUNTY, CA

Number of sites tested: 63

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.711 pCi/L	98%	2%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	0.933 pCi/L	100%	0%	0%

#### **TOPOGRAPHIC INFORMATION**

USGS 7.5' Digital Elevation Model (DEM)

Source: United States Geologic Survey

EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map Source: U.S. Geological Survey

#### HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA Telephone: 877-336-2627 Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory Source: Department of Fish & Game Telephone: 916-445-0411

#### HYDROGEOLOGIC INFORMATION

AQUIFLOW<sup>R</sup> Information System

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

#### **GEOLOGIC INFORMATION**

#### Geologic Age and Rock Stratigraphic Unit

Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

#### STATSGO: State Soil Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS) The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS) Telephone: 800-672-5559

SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

## PHYSICAL SETTING SOURCE RECORDS SEARCHED

#### LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS) This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Database Source: Department of Water Resources Telephone: 916-651-9648

California Drinking Water Quality Database Source: Department of Public Health

Telephone: 916-324-2319

The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

#### **OTHER STATE DATABASE INFORMATION**

California Oil and Gas Well Locations Source: Department of Conservation Telephone: 916-323-1779 Oil and Gas well locations in the state.

#### RADON

State Database: CA Radon Source: Department of Health Services Telephone: 916-324-2208 Radon Database for California

Area Radon Information

Source: USGS Telephone: 703-356-4020 The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones Source: EPA Telephone: 703-356-4020 Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

## PHYSICAL SETTING SOURCE RECORDS SEARCHED

#### OTHER

Airport Landing Facilities: Private and public use landing facilities Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

#### STREET AND ADDRESS INFORMATION

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119/121 S. Soto Street & 2316/2324 1st St. Phase 1 119 South Soto Street Los Angeles, CA 90033

Inquiry Number: 4967023.9 June 15, 2017

# The EDR Aerial Photo Decade Package



6 Armstrong Road, 4th floor Shelton, CT 06484 Toll Free: 800.352.0050 www.edrnet.com

EDR Aerial Photo Decade Package		06/15/17
Site Name:	Client Name:	

119/121 S. Soto Street & 2316/ 119 South Soto Street Los Angeles, CA 90033 EDR Inquiry # 4967023.9

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Geocon Geotechnical & Env 3303 North San Fernando Blvd. Burbank, CA 91504 Contact: Mike Akoto

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search	Results:		
<u>Year</u>	<u>Scale</u>	Details	Source
2012	1"=500'	Flight Year: 2012	USDA/NAIP
2010	1"=500'	Flight Year: 2010	USDA/NAIP
2009	1"=500'	Flight Year: 2009	USDA/NAIP
2005	1"=500'	Flight Year: 2005	USDA/NAIP
2002	1"=500'	Flight Date: June 10, 2002	USDA
1994	1"=500'	Acquisition Date: May 31, 1994	USGS/DOQQ
1989	1"=500'	Flight Date: August 22, 1989	USDA
1983	1"=500'	Flight Date: November 19, 1983	EDR Proprietary Brewster Pacific
1977	1"=500'	Flight Date: April 25, 1977	EDR Proprietary Brewster Pacific
1972	1"=500'	Flight Date: November 21, 1972	EDR Proprietary Brewster Pacific
1964	1"=500'	Flight Date: July 28, 1964	USGS
1952	1"=500'	Flight Date: August 01, 1952	USGS
1948	1"=500'	Flight Date: July 10, 1948	USGS
1938	1"=500'	Flight Date: May 22, 1938	USDA
1928	1"=500'	Flight Date: January 01, 1928	USGS
1923	1"=500'	Flight Date: January 01, 1923	FAIR

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EDR Aerial Photo Decade Package		
Site Name:	Client Name:	

119/121 S. Soto Street & 2316/ 119 South Soto Street Los Angeles, CA 90033 EDR Inquiry # 4967023.9

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Search	Results:		
<u>Year</u>	<u>Scale</u>	Details	Source
2012	1"=500'	Flight Year: 2012	USDA/NAIP
2010	1"=500'	Flight Year: 2010	USDA/NAIP
2009	1"=500'	Flight Year: 2009	USDA/NAIP
2005	1"=500'	Flight Year: 2005	USDA/NAIP
2002	1"=500'	Flight Date: June 10, 2002	USDA
1994	1"=500'	Acquisition Date: May 31, 1994	USGS/DOQQ
1989	1"=500'	Flight Date: August 22, 1989	USDA
1983	1"=500'	Flight Date: November 19, 1983	EDR Proprietary Brewster Pacific
1977	1"=500'	Flight Date: April 25, 1977	EDR Proprietary Brewster Pacific
1972	1"=500'	Flight Date: November 21, 1972	EDR Proprietary Brewster Pacific
1964	1"=500'	Flight Date: July 28, 1964	USGS
1952	1"=500'	Flight Date: August 01, 1952	USGS
1948	1"=500'	Flight Date: July 10, 1948	USGS
1938	1"=500'	Flight Date: May 22, 1938	USDA
1928	1"=500'	Flight Date: January 01, 1928	USGS
1923	1"=500'	Flight Date: January 01, 1923	FAIR

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119/121 S. Soto Street & 2316/2324 1st St. Phase 1 119 South Soto Street Los Angeles, CA 90033

Inquiry Number: 4967023.4 June 14, 2017

## **EDR Historical Topo Map Report** k]h Ei UXA UW



6 Armstrong Road, 4th floor Shelton, CT 06484 Toll Free: 800.352.0050 www.edrnet.com

98F'<]ghcf]WU``Hcdc'AUd'FYdcfh 06/14/17		
Site Name:	Client Name:	
119/121 S. Soto Street & 2316/ 119 South Soto Street Los Angeles, CA 90033 ÒÖÜ໓() ଁ ଧର୍ମରି 4967023.4	Geocon Geotechnical & Env 3303 North San Fernando Blvd. Burbank, CA 91504 Ô[}œ&cK Mike Akoto	

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Geocon Geotechnical & Env were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results	:	Coordinates:	
P.O.#	A9622-77-02	Latitude.	34.0434 34° 2' 36" North
Dfc^YWh.	119/121 S. Soto St & 2316/232	Longitude.	-118.210496 -118° 12' 38" West
		UTM Zone.	Zone 11 North
		UTM X Meters.	388267.07
		UTM Y Meters.	3767628.92
		Elevation.	302.00' above sea level
AUdg <sup>`</sup> Dfcj]XYX.			
2012	1896		
1994	1894		
1981			
1972			
1966			
1953			
1926, 1928			
1900			

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#### **2012 Source Sheets**



Los Angeles 2012 7.5-minute, 24000

#### **1994 Source Sheets**



Los Angeles 1994 7.5-minute, 24000 Aerial Photo Revised 1978

#### **1981 Source Sheets**



Los Angeles 1981 7.5-minute, 24000 Aerial Photo Revised 1978

#### **1972 Source Sheets**



Los Angeles 1972 7.5-minute, 24000 Aerial Photo Revised 1972

#### **1966 Source Sheets**



Los Angeles 1966 7.5-minute, 24000 Aerial Photo Revised 1964

#### **1953 Source Sheets**



Los Angeles 1953 7.5-minute, 24000 Aerial Photo Revised 1952

#### 1926, 1928 Source Sheets







Los Angeles 1928 7.5-minute, 24000

#### **1900 Source Sheets**



Pasadena 1900 15-minute, 62500



Los Angeles 1900 15-minute, 62500

#### **1896 Source Sheets**



Pasadena 1896 15-minute, 62500

#### **1894 Source Sheets**



Los Angeles 1894 15-minute, 62500





## <]ghcf]WU``Hcdc'AUd





## <]ghcf]WU``Hcdc'AUd





## <]ghcf]WU``Hcdc'AUd

#### 1972



Ú Y AAAAAÚAAAAAAÚÓ

Geocon Geotechnical & Env

CLIENT:



## <]ghcf]WU``Hcdc`AUd

### 1966





SITE NAME:	119/121 S. Soto Street & 2316/2324 1st §
ADDRESS:	119 South Soto Street
	Los Angeles, CA 90033
CLIENT:	Geocon Geotechnical & Env





SITE NAME:	119/121 S. Soto Street & 2316/2324 1st §
ADDRESS:	119 South Soto Street
	Los Angeles, CA 90033
CLIENT:	Geocon Geotechnical & Env



This leport includes information from the following map sheet(s).

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SITE	E NAME:	119/121 S. So	to Street & 2316/2324 1	st {



SITE NAME:119/121 S. Soto Street & 2316/2324 1st SADDRESS:119 South Soto Street<br/>Los Angeles, CA 90033CLIENT:Geocon Geotechnical & Env

٠N

















SITE NAME:	119/121 S. Soto Street & 2316/2324 1st §
ADDRESS:	119 South Soto Street
	Los Angeles, CA 90033
CLIENT:	Geocon Geotechnical & Env





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# H\Y'98F!7]hm'8]fYWhcfm'5VghfUWh

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#### 9L97IH=J9<sup>·</sup>GIAA5FM

#### 89G7F=DH=CB

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#### F97CF8<sup>GCIF79G</sup>

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ÒÖÜkla+Ala&^} •^åkc[k!^];[å`&^k&^;cæa}kôàc^köa;^&c[!^k;[!\+kà^kc@^k&[]^ia\*@ck@[|å^;+k[~kc@[•^k;[!\+ÈkV@^k ]`!&@æ•^!k[-kc@a+kÒÖÜkôàc^köa;^&c[;^kÜ^][:ck { æ^ka}&|\*a^kacka}k!^][:c;=Dkå^ja;c^;^åkc[kæk&`+c[ { ^;Ek Ü^];[å`&ca[}k[-kôàc^köa;^&c[;a^+k;ac@[`ck]^; { a++a[}k[-kc@^k]`àja+@^;k[;kja&^}+^åk;c^}a[;k { æ^kà^kæk;a[]æca[}k &[]^ia\*@cE



#### F9G95F7<GIAA5FM

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<u>MYUf</u>	<u>Gc i fWY</u>	<u>HD</u>	<u>5X^c]b]b[</u>	<u>HYIh'5VghfUWh</u>	<u>GcifWY'=aU[Y</u>
G€FI	ÒÖÜÁÖå*åcæ ÁŒ¦&®åç^	Ë	Ý	Ý	Ë
G€F€	ÒÖÜÁÖā*āœJÁŒ¦&@åç^	Ë	Ý	Ý	Ë
	ÒÖÜÁÖā*āœJÁŒ¦&@åç^	Ý	Ý	Ý	Ë
G€€Î	Pæi}^•ÁÂÔ[{]æ}^ÉÁQ}&Ė	Ë	Ý	Ý	Ë
	₽æã}^•ÁÁÔ[{]æ}^ÊÁQ}&È	Ý	Ý	Ý	Ë
G€€I	Pæi}^•ÅÔ[{]æ}^	Ë	Ë	Ë	Ë
G€€H	Pæi}^•ÁBÁÔ[{]æ}^	Ë	Ë	Ë	Ë
G€€F	Pæi}^•ÁÂÔ[{]æ}^ÉÁQ}&Ė	Ë	Ë	Ë	Ë
G€€€	Pæi}^∙	Ë	Ë	Ë	Ë
FJJJ	Pæi}^•ÅÔ[{]æ}^	Ë	Ë	Ë	Ë
FJJÎ	ÕVÒ	Ë	Ë	Ë	Ë
FJJÍ	Úæ&ā-ā&ÅÓ^	Ë	Ë	Ë	Ë

#### 9L97IH=J9<sup>·</sup>GIAA5FM

<u>MYUf</u>	<u>Gc i fWY</u>	<u>HD</u>	<u>5X^c]b]b[</u>	<u>HYIh'5VghfUWh</u>	<u>GcifWY<sup>:</sup>=aU[Y</u>
FJJG	ÚŒÔIØIÔÁÓÒŠŠÁY PIVÒÁÚŒÕÒÙ	Ë	Ë	Ë	Ë
FJJF	Úæ&ā~ā&ÅÁÓ^	Ë	Ë	Ë	Ë
FJJ€	Úæ&ā~ā&ÅÓ^	Ý	Ý	Ý	Ë
FJÌÎ	Úæ&ā~ā&ÅÓ^	Ý	Ý	Ý	Ë
FJÌÍ	Úæ&ā~ā&ÅÓ^	Ë	Ë	Ë	Ë
FJÌF	Úæ&ā~ā&ÁV^ ^]@[}^	Ë	Ý	Ý	Ë
	Úæ&ā~ā&ÁV^ ^]@[}^	Ý	Ý	Ý	Ë
FJÌ€	Úæ&ā~ā&ÁV^ ^]@[}^	Ë	Ý	Ý	Ë
FJÏÎ	Úæ&ā~ā&ÁV^ ^]@[}^	Ý	Ý	Ý	Ë
FJÏÍ	Úæ&ā~ā&ÁV^ ^]@[}^	Ë	Ë	Ë	Ë
FJÏG	ÜĖÁŠĖÁÚ [   \ÁBÁÔ [ È	Ë	Ë	Ë	Ë
FJÏF	Úæ&ネーネ&ÁV^ ^]@[}^	Ý	Ý	Ý	Ë
FJÏ€	Úæ&ネーネ&ÁV^ ^]@[}^	Ë	Ë	Ë	Ë
FJÎJ	Úæ&ネーネ&ÁV^ ^]@[}^	Ë	Ë	Ë	Ë
FJÎÏ	Úæ&å~å&ÅV^ ^]@[}^	Ë	Ý	Ý	Ë
	Úæ&å~å&ÅV^ ^]@[}^	Ý	Ý	Ý	Ë
FJÎÎ	Úæ&å~å&ÅV^ ^]@[}^	Ë	Ë	Ë	Ë
FJÎÍ	ÕVÒ	Ë	Ë	Ë	Ë
FJÎI	Úæ&å~å&ÅV^ ^]@[}^	Ë	Ý	Ý	Ë
FJÎH	Úæ&å~å&ÅV^ ^]@[}^	Ë	Ë	Ë	Ë
FJÎG	Úæ&å~å&ÅV^ ^]@[}^	Ë	Ý	Ý	Ë
	Úæ&i~i&ÁV^ ^]@[}^	Ý	Ý	Ý	Ë
FJÎF	ÜĖÁŠĖÁÚ [   \ ÁBÁÔ [ È	Ë	Ë	Ë	Ë
FJ΀	Úæ&ā~ā&ÁV^ ^]@[}^	Ë	Ý	Ý	Ë
FJÍÌ	Úæ&i~i&ÁV^ ^]@[}^	Ý	Ý	Ý	Ë
FJÍÏ	Úæ&ネーネ&ÁV^ ^]@[}^	Ë	Ý	Ý	Ë
FJÍÎ	Úæ&ä~å&ÁV^ ^]@[}^	Ë	Ë	Ë	Ë
FJÍÍ	ÜĖÁŠĖÁÚ [   \ÁBÁÔ [ È	Ë	Ë	Ë	Ë
FJÍI	ÜĖÁŠĖÁÚ [   \ÁBÁÔ [ È	Ë	Ý	Ý	Ë
FJÍG	Š[•ÁŒ}*^ ^•ÁÖäł^&c[¦^ÁÔ[È	Ë	Ë	Ë	Ë
FJÍF	Úæ&&&ÅV^ ^]@[}^ÅBÅV^ ^*¦æ]@ÅÔ[È	Ë	Ý	Ý	Ë
	Úæ&&&ÅV^ ^]@[}^ÅBÅV^ ^*¦æ]@ÅÔ[È	Ý	Ý	Ý	Ë
FJÍ€	Úæ&ネーネ&ÁV^ ^]@[}^	Ë	Ý	Ý	Ë
FJIJ	Š[•ÁŒ}*^ ^•ÁÖä!^&c[¦^ÁÔ[È	Ë	Ë	Ë	Ë
FJIÌ	Œ••[&åæc^åÅV^ ^]@[}^ÅÔ[{]æ}^ÊÅŠcåÈ	Ë	Ë	Ë	Ë
FJIÏ	Úæ&ā~ā&ÁÖā¦^&c[¦^ÁÔ[È	Ë	Ë	Ë	Ë
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FJIÍ	ÜĖÁŠĖÁÚ [   \ÁBÁÔ [ È	Ë	Ë	Ë	Ë
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FJIG	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È	Ý	Ý	Ý	Ë
FJI€	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È	Ë	Ë	Ë	Ë
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#### 9L97IH=J9<sup>·</sup>GIAA5FM

<u>MYUf</u>	<u>GcifWY</u>	<u>HD</u>	<u>5X^c]b]b[</u>	<u>HYIh'5VghfUWh</u>	<u>GcifWY`=aU[Y</u>
FJHÌ	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[{]æ}^Á Ú`à ä•@^¦•	Ë	Ë	Ë	Ë
FJHÏ	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[Ė	Ý	Ý	Ý	Ë
FJHÎ	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[Ė	Ë	Ë	Ë	Ë
FJHÍ	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È	Ë	Ë	Ë	Ë
FJHI	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È	Ë	Ë	Ë	Ë
FJHH	Š[•ÁŒ}*^ ^•ÁÖå¦^&c[¦^ÁÔ[È	Ý	Ý	Ý	Ë
FJHG	Š[•ÁŒ}*^ ^•ÁÖå¦^&c[¦^ÁÔ[È	Ë	Ë	Ë	Ë
FJHF	VÜ(ÓWÞÒĖÞÒ Y ÙÁÚWÓŠ(ÙΡ(ÞÕÁÔUÈ	Ë	Ë	Ë	Ë
FJH€	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È	Ë	Ë	Ë	Ë
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FJGÌ	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È	Ë	Ë	Ë	Ë
FJGÏ	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È	Ë	Ë	Ë	Ë
FJGÎ	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È	Ë	Ë	Ë	Ë
FJGÍ	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È	Ë	Ë	Ë	Ë
FJGI	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È	Ý	Ý	Ý	Ë
FJGH	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È	Ë	Ë	Ë	Ë
FJGF	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È	Ë	Ë	Ë	Ë
FJG€	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È	Ë	Ë	Ë	Ë

#### 9L97IH=J9<sup>G</sup>IAA5FM

#### G9@97H98<sup>5</sup>88F9GG9G

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<u>5XXfYgg</u>	<u>HmdY</u>	<u>:]bX]b[g</u>
FGFÁÙ [ čœÁÙ [ c [ ÁÙc¦^^c	7`]Ybh9bhHYX	L
GHFÎÁF∙cÁÙc¦^^c	7`]Ybh9bhHYX	L
GHG I ÁF∙cÁÙc¦^^c	7`]Ybh9bhfYX	L

#### H5F;9H<sup>·</sup>DFCD9FHM<sup>·</sup>=B:CFA5H=CB

#### <u>588F9GG</u>

FFJÁÙ[č@ÁÙ[c[ÁÙc¦^^c Š[•ÁŒ}\*^|^•ÉÁÔŒÁÁÁJ€€HH

#### <u>:=B8=B;G'89H5=@</u>

Væ¦\*^cÁÚ¦[]^¦c^Á¦^•^æ¦&@Áå^cæã|È

#### <u>%gh'GhfYYh</u>

#### &'%\*``%gh`GhfYYh

<u>I gYg</u>	<u>GcifWY</u>
ŠŧÓÜÒÜŧŒ	Pæi}^•ÁÔ[{]æ}^ÉÁQ}&È
TUÞVÒÜÜÒŸ	Pæã}^∙ÁÁÔ[{]æ}^ÉÁQ}&È
ÕUÞZŒŠÒZÁRUÙÒÁÒ	Úæ&ā~ā&ÅÓ^
ŠŧÓÜÒÜŧŒÁÕUÞZŒŠÒZ	Úæ&ā~ā&ÁÓ^
ÜQUÙÁRÒÙWÙŒ	Úæ&ā~ā&ÁÓ^
ÕUÞZŒŠÒZÁRUÙÒÁÒ	Úæ&ā~ā&ÁÓ^
ŠŧÓÜÒÜŧŒÁÕUÞZŒŠÒZ	Úæ&ā~ā&ÁÓ^
ÕUÞZŒŠÒZÁRUÙÒÁÒ	Úæ&ā~ā&ÁV^ ^]@[}^
ÕUÞZŒŠÒZÁRUÙÒÁÒÁå}&[{ ácæ¢	Úæ&ā~ā&ÁV^ ^]@[}^
Óæ¦¦^} [ÁV@^¦^∙æ	Úæ&ā~ā&ÁV^ ^]@[}^
Ò•c¦æåæÅÚ^c^ÅÕ	Úæ&ā~ā&ÁV^ ^]@[}^
ÕUÞZŒŠÒZÁRUÙÒÁÒÁQ}&Ácæ¢	Úæ&ā~ā&ÁV^ ^]@[}^
Ô\`:ÁÕ^}[ç^çæ	Úæ&ā~ā&ÁV^ ^]@[}^
Ô¦˘:ÁÞ[¦à^¦c[ÁÙ	Úæ&ā~ā&ÁV^ ^]@[}^
ÕUÞZŒŠÒZÁRUÙÒÁÒÁQ}&Ácæ¢	Úæ&ā~ā&ÁV^ ^]@[}^
Üã[bæ∙ÁÕá]à^lc	Úæ&ā~ā&ÁV^ ^]@[}^
Œ¦^  æ}[ÁŒ}c[}ã[Á⊤æ¦*æ¦ācæÁ{^&@	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
Q { æ { ˘ } æÅ T [ ¦āc [ Á&  \	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
Væ\æ@æ•@åÁS`}āÁØ`{ā\æÁ&[~~^^	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
Sæ,æ{ [c[ÁSi&@i {æc∙`ÁŸic&@iá,i}^•	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
Qååã}*•ÁY { ÁÓÁÙæ¦æ@Á¦∧∙c¦	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[Ė
Õæ  ˘]ÁŒ  å•[}Á0Á]æã}c¦Á¦	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
Őæ  ˘]ÁU  å^}Á@	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
Pæ  ÁÔæc@ŸãåÁRÁÔÅ@	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[Ė
Sã { { ^^ÁÞ^ccā^ÁŠÁ¦	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[Ė
Sã {  { ^^ÅÜæ^ { [ } åÁŠÁæčc[Á { ^&@Á@	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	$IgYg$ Slóüðülæ $T \cup F vðülðö' O U F ZÆŠÓZÁRUÚDÓAÓ SlóÜðÜlæAÖ U F ZÆŠÓZÁRUÚDÓAÓ SlóÜðÜlæAÖ U F ZÆŠÓZ UNUÚÁRÓÙ WÙÆ O U F ZÆŠÓZÁRUÚDÓAÓ SlóÜðÜlæAÖ U F ZÆŠÓZ O U F ZÆŠÓZÁRUÚDÓAÓ O U F ZÆŠÓZÁRUÚDÓAÓ O U F ZÆŠÓZÁRUÚDÓAÓAL { Ácæ¢ Ó all^} [ÁV@^!^*æ Ò * clæðæAÚ ^ c^AÖ O U F ZÆŠÓZÁRUÚDÓAÓAL & Acæ¢ Ô!* : ÅD^{[c^cæ} Ô!* : ÅD^{[c^cæ} Ô!* : ÅF [:à^:[cÅU O U F ZÆŠÓZÁRUÚDÓAÓAL & Acæ¢ Üi [hæ*ÁÕi]à^:c E!^] æ] [ÅÆ c [] à [Å Tæ!*æ!icæÅ { ^&@ U { æ { '!æÅ T [!ic[Å& \ Væ\æ@æ*@iÁS `] à ÅØ ` { å \æA& [^^ Sæ , æ { [c[ÅSi&@i { æc* ÅÝic&@i ], à]^** Uääi} * ÅY { ÅÓAÙ æ!æ@Å!^*c! Õæ  * ] ÅU  à^} Å@ Pæ  ÅÔæc@A, i à ÅRÁÔÅ@ Si { { ^ Å D ^ cci~ÅŠÅ! Si { { ^ ÅD ^ cci~ÅŠÅ! $

<u>GcifWY</u>

FJGI Uà^¦cĺÓ^¦cĺ&æ¦]ĺ¦

#### &'&(``%gh`GhfYYh

## <u>MYUf IgYg</u>

FJJ€	ÔŒÙVQŠŠUÁԌ܊UÙÁŒ	Úæ&ā~ā&ÁÓ
FJÎÏ	T榢i}^∶ÁÚ^å¦[ÁÕ	Úæ&ā~ā&ÁV
FJÎG	Óæ¦æ♭[●ÅR^●˘●Å⊤¦●	Úæ&ā~ā&ÁV
FJÍÌ	Œçã}æÁÜ[•æ¦ã[ÁÚ	Úæ&ā~ā&ÁV
FJIG	ÜQUÙÁÓ^}^åå&cæÁ¸iåÅÞå&@[ æ∙	Š[•ÁŒ}*/
FJHÏ	Þ[{æÅÞ[à[¦˘	Š[•ÁŒ}*/
	Þ[{æÅÙ`{	Š[•ÁŒ}*/
	Þ[{æÁV[{ÁVÁŸ[•@ǎÁ¸ǎ*Á{\!	Š[•ÁŒ}*/
FJHH	ÓÜUYÞÁP^}!^ÁRÁTÁÔæ!¦ā^Á æà	Š[●ÁŒ}**
FJGJ	Ó^&^¦¦æÁR[•^ÁQ•æà^ Ácæä [¦	Š[●ÁŒ}*⁄

#### <u>9'%GH</u>

#### &'%\*``9`%GH

## <u>Gc i fWY</u>

Úæ&å÷&&ÅÓ^|| Úæ&å÷&&ÅV^|^]@[}^ Úæ&å÷&&ÅV^|^]@[}^ Úæ&å÷&&ÅV^|^]@[}^ Š[•ÅŒ}\*^|^•ÅÖå!^&c[!^ÅÔ[Ė Š[•ÅŒ}\*^|^•ÅÖå!^&c[!^ÅÔ[Ė Š[•ÅŒ}\*^|^•ÅÖå!^&c[!^ÅÔ[Ė Š[•ÅŒ}\*^|^•ÅÖå!^&c[!^ÅÔ[Ė Š[•ÅŒ}\*^|^•ÅÖå!^&c[!^ÅÔ[Ė

Š[•ÁŒ}\*^|^•ÁÖã¦^&c[¦^ÁÔ[È

<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
FJJ€	ÕUÞZŒŠÒZĺRUÙÒĺÒ	Úæ&ā~ā&ÁÓ^
	ŠŧÓÜÒÜŧŒłÕUÞZŒŠÒZ	Úæ&ā~ā&ÁÓ^
	ÜQUÙÁRÒÙWÙŒ	Úæ&ā~ā&ÁÓ^
FJÌÎ	ÕUÞZŒŠÒZÁRUÙÒÁÒ	Úæ&ā~ā&ÁÓ^
	ŠŧÓÜÒÜŧŒŀÕUÞZŒŠÒZ	Úæ&ā~ā&ÁÓ^
FJÌF	ÕUÞZŒŠÒZÁRUÙÒÁÒ	Úæ&ā~ā&ÁV^ ^]@[}^
FJÏF	ÕUÞZŒŠÒZÁRUÙÒÁÒÁå}&[{ ácæ¢	Úæ&ā~ā&ÁV^ ^]@[}^
FJÎG	Ô¦゙:ĺÕ^}[ç^çæ	Úæ&ā~ā&ÁV^ ^]@[}^
	Ô¦˘:ÁÞ[¦à^lc[ÁÙ	Úæ&ā~ā&ÁV^ ^]@[}^
	ÕUÞZŒŠÒZÁRUÙÒÁÒÁQ}&Ácæ¢	Úæ&ā~ā&ÁV^ ^]@[}^
FJIG	Œ¦^  æ}[ÁŒ}c[}å[Á⊤æ¦*æ¦åœÁ{^&@	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Q { æ { `¦æÁ⊤[¦āc[Á& \	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Væ\æ@æ∙@åÁS`}åÁØ`{å\æÁ&[~~^^	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
FJHÏ	Sæ,æ{[c[ÁSi&@i{æc∙`ÁŸic&@iÁ,i}^•	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
FJHH	Qååi}*•ÁY {ÁÓÁÙæ¦æ@Á¦∧∙c¦	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
FJGI	Őæ  `]ÁŒ  ā•[}ÁQÁ]æä}c¦Á¦	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Őæ  ˘]ÁU  å^}Á@	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Pæ  ÁÔæc@Á¸iåÁRÁÔÁ@	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Sā { { ^^ÁÞ^ccā^ÁŠÁ!	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Si {	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È

<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
FJGI	Uà^¦cłÓ^¦cł&æ¦]Å	Š[•ÁŒ}*^ ^•ÁÖã!^&c[¦^ÁÔ[È
&'&(``9'%	GH	
<u>MYUf</u>	<u>IgYg</u>	<u>Gc i fWY</u>
FJJ€	ÔŒÙVQŠŠUÁԌ܊UÙÁŒ	Úæ&ā~ā&ÅÓ^
FJÎG	Óæ¦æb[●ÅR^●˘●Å∀¦●	Úæ&i~i&ÁV^ ^]@[}^
FJIG	- ÜℚUÙÁÓ^}^åĩ&cæÁ ูĩåÅÞĩ&@[ æ∙	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[Ė
FJHÏ	Þ[{æÅÞ[à[¦ĭ	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[Ė
	Þ[{æÅÙ ~{	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[Ė
	Þ[{æÁV[{ÁVÁŸ[•@àÁ¸à*Á{\¦	Š[•ÁŒ}*^ ^•ÁÖå¦^&c[¦^ÁÔ[Ė
FJHH	ÓÜUYÞÁP^}¦^ÁRÁTÁÔæ¦¦ǎ^Á æà	Š[•ÁŒ}*^ ^•ÁÖå¦^&c[¦^ÁÔ[Ė
FJGJ	Ó^&^¦¦æÁR[•^ÁQ•æà^ Ácæä [¦	Š[●ÁŒ}*^ ^●ÁÖã¦^&c[¦^ÁÔ[È
<b>&amp;'</b> %*`%#&`	`9`%GH	
<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
FJÌÎ	ÜQUÙÁRÒÙWÙŒ	Úæ&ā-ā&ÅÓ^
<b>&amp;'</b> %*`%#(`	`9`%GH	
<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
FJÌÎ	ŒÜŒÙÁÕÜÒÕUÜŧU	Úæ&ā~ā&ÅÓ^
FJÌF	ŒÜŒÙÁÕÜÒÕUÜQU	Úæ&ā-ā&ÁV^ ^]@[}^
<u>9`%gh`Gh</u>	L	
& <b>'</b> %*``9`%	gh`Gh	
<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
G€F€	ŠŧÓÜÒÜŧŒÁŦUÞVÒÜÜÒŸ	ÒÖÜÁÖä*ăcæ ÁŒ¦&@äç^
<u>9'%GH'G</u>	Н	
& <b>'</b> %*``9`%	GH'GH	
<u>MYUf</u>	<u>IgYg</u>	<u>Gc i fWY</u>
G€€Î	ŠĮÓÜÒÜQŒ	₽æã}^∙ÁÅÔ[{]æ}^ÊÁQ}&È
	ΤUÞVÒÜÜÒΫ	₽æã}^∙ÁÅÔ[{]æ}^ÊÁQ}&È
FJÎÏ	Óæ¦¦^} [ÅV@^¦^∙æ	Úæ&ā-ā&ÅV^ ^]@[}^
	Ò∙c¦æåæÁÚ^c^ÁÕ	Úæ&i~i&ÁV^ ^]@[}^

ÕUÞZŒŠÒZÁRUÙÒÁÒÁQ}&Ácæ¢

Üå[bæ∙ÁÕå|à^¦c

FJÍÌ

IJÎÏ€GHËÍ

Úæ&ā~ā&ÁV^|^]@[}^

Úæ&ā~ā&ÅV^|^]@[}^

#### &'&(``9`%GH`GH

<u>MYUf</u>	<u>IgYg</u>	<u>Gc i fWY</u>
FJÎÏ	T榜}^∶ÁÚ^å¦ [ÁÕ	Úæ&ā-ā&ÁV^ ^]@[}^
FJÍÌ	Œçâ}æÁÜ[•æ¦å[ÁÚ	Úæ&ā~ā&ÁV^ ^]@[}^

#### <u>G'GCHC</u>

#### %%-``G`GCHC

<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
FJJ€	ÔŒÙVQŠŠUÁŒÞÕÒŠÁŠ	Úæ&ā~ā&ÁÓ^
FJÌÎ	ÔŒÙV\\ŠŠUÁŒÞÕÒŠÁŠ	Úæ&ā-ā&ÁÓ^
FJÏF	W^^åæłÔ@i&[ÁY	Úæ&ā~ā&ÁV^ ^]@[}^
FJIG	Š`à^ÁÖæ} ÁŠ[`ã•æ	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
FJHÏ	Š`à^ÁÖæ} ÁŠ[`¦ā•æÁR	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
FJHH	Š`à^ÁÖæ} ÁŠ[`ã•æ	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Š`à^ÁÕ¦æ&^Á•c^}	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
FJGJ	Š`à^ÁÖæ} ÁŠ[`ã•^	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Š~à^ÁÕ¦æ&^ÁŠÁà\]¦ÁRÁTÁPæ ^ÁÔ[	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Š`à^ÁÙc^]@ÁTÁPæ@}ÁBÁŠ`à^	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
FJGI	Š~à^ÁÕ¦æ&^ÁŠÁ&[ { ]cÁ[]¦Á¦	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Š`à^ÁŠ[ĭ╿ÁRÁ¦	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È

#### %&%``G`GCHC

<u>MYUf</u>	<u>I g Y g</u>	
FJJ€	ŒÙVUÜ	

FJJ€	ŒÙVUÜÕŒÁÕŠUÜŒÁÕ	Úæ&ā~
FJÌF	ÕŠUÜŒÁÕ	Úæ&ā~
FJÏF	Ø[¦&@cÁÔæ¦ ÁÒ	Úæ&ā~
FJÎÏ	Ø[¦&@cÁÔæ¦ ÁÒ	Úæ&ā~
FJÎG	Ø[¦&@cÁÔæ¦ ÁÒ	Úæ&ā~
FJIG	Tæc∙`åæÁ₽^ã∙`\^ÁSã\`\[Á*å}¦	Š[•ÁO
FJGJ	Ó¦^} *æ¦c}^\Å₽æ} }æ®ÅT ¦∙	Š[•ÁO
	Ó¦^} *æ¦c}^\ÁSæc@ÁØ	Š[•ÁO
FJGI	Ó¦^ { *æ¦å^}^¦ÅPæ} }æ@Å@	Š[•ÁO
	Ó¦^ { *æ¦å^}^¦ÁSæc^Á¦	Š[•Á0

#### <u>G'GCHC'GH</u>

%%-``G`GCHC`GH

<u>MYUf</u>	<u>IgYg</u>	<u>Gc i fWY</u>
FJÏÎ	Ôæ•ci  [ÅŒ}*^ ÅŠ	Úæ&ā~ā&ÅV^ ^]@[}^

|--|

```
Úæ&i-i&hÓ^||

Úæ&i-i&hV^|^]@[}^

Úæ&i-i&hV^|^]@[}^

Úæ&i-i&hV^|^]@[}^

Úæ&i-i&hV^|^]@[}^

Š[=hCE}*^|^-hÖi!^&c[!^hÔ[Ė

Š[=hCE}*^|^-hÖi!^&c[!^hÔ[Ė

Š[=hCE}*^|^-hÖi!^&c[!^hÔ[Ė

Š[=hCE}*^|^-hÖi!^&c[!^hÔ[Ė
```

<u>GcifWY</u>

<u>GcifWY</u>

Úæ&ā~ā&ÁV^|^]@[}^

Pæi}^•ÁÔ[{]æ}^ÊÁQ}&È Úæ&ā~ā&ÁV^|^]@[}^

<u>MYUf</u>	<u>IgYg</u>	
( )		,

Tā^æ\*æ¸æÅQ∙æ{ā FJÍÌ

#### %&%<sup>...</sup>G<sup>.</sup>GCHC<sup>.</sup>GH

<u>MYUf</u>	<u> gYg</u>
G€€Î	€€€
FJÍÌ	Ø[¦&@cÁÔæ¦ ÁÒ

#### GCHC GH G

%&%``G

&%``GCH	C'GH'G	
<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
FJÍF	ÙÁÙ [ c [ ÁØ [ ¦&@cÁÔæ¦ ÁÒÁ¦	Úæ&i~i&ÁV^ ^]@[}^ÁBÁV^ ^*¦æ]@ÁÔ[È

#### <u>Gcih\'Gchc'GhfYYh</u>

#### %&%``Gcih\`Gchc`GhfYYh

<u>MYUf</u>	<u>I gYg</u>	<u>GcifWY</u>
G€€Î	€€€	₽æå}^•ÁÁÔ[{]æ}^ÊÁQ}&Ė
	Þ[ÁÔ`¦¦^}cÁŠā•cā}*	₽æå}^•ÁÁÔ[{]æ}^ÉÁQ}&Ė
FJJ€	ŒÙVUÜÕŒÁÕŠUÜŒÁÕ	Úæ&å-å&ÁÓ^
	ÚÒÖÜUÙŒĺŠWÜÖÒÙ	Úæ&å~å&ÁÓ^
FJÌÎ	ŠÒUÞŃTÒŠÖŒ	Úæ&å-å&ÁÓ^
FJÌF	ÕŒÜÔŒÁÚŒÙÔWŒŠÁÜ	Úæ&å-å&ÁV^ ^]@[}^
	ŐŠUÜŒÁŐ	Úæ&å~å&ÁV^ ^]@[}^
FJÏF	Ø [ ] & @cÁÔæ]   ÅÒ	Úæ&å~å&ÁV^ ^]@[}^
	Ú^¦^:ÁXā&c[¦āæ	Úæ&å~å&ÁV^ ^]@[}^
FJÎÏ	Œ¦æ`b[ÁØ^ å¢	Úæ&å-å&ÁV^ ^]@[}^
	Ø [ ] & @cÁÔæ]   ÁÒ	Úæ&å-å&ÁV^ ^]@[}^
FJÎG	Ø[]&@cÅÔæ] ÅÒ	Úæ&å~å&ÁV^ ^]@[}^
FJÍÌ	Ø^å^¦ÅÚæ`	Úæ&å-å&ÁV^ ^]@[}^
	Ø [ ] & @cÁÔæ]   ÅÒ	Úæ&ả-ã&ÁV^ ^]@[}^
FJÍF	ÞÁÙ[c[ÁØ^å^¦ÁÚæ˘ Á¦	Úæ&å~å&ÁV^ ^]@[}^ÁBÁV^ ^*¦æ]@ÁÔ[È
	ÞÁÙ[c[ÁÕ[å}ā&\ÁPæ!¦^ÁŠÁ¦	Úæ&å~å&ÁV^ ^]@[}^ÁBÁV^ ^*¦æ]@ÁÔ[È
	ÙÁÙ [ c [ ÁØ [ ¦&@cÁÔæ¦ ÁÒÁ¦	Úæ&å~å&ÁV^ ^]@[}^ÁBÁV^ ^*¦æ]@ÁÔ[Ė
FJIG	ØÒÖÖÜÁÚæ` ÁÔ^ iæÁ& \	Š[•ÁŒ}*^ ^•ÁÖã!^&c[¦^ÁÔ[Ė
	Őäà ä}ÁXä&c[!Á₽ÁTæ!*`^!äc^Á^ ^çÁ[]!	Š[•ÁŒ}*^ ^•ÁÖã!^&c[¦^ÁÔ[È
	Tæc•`åæÁP^å•`\^ÁSā\`\[Á*å}¦	Š[•ÁŒ}*^ ^•ÁÖã!^&c[¦^ÁÔ[È
FJHÏ	ŒŒÜUÞÁŒà¦Áàæ¦c}å¦	Š[•ÁŒ}*^ ^•ÁÖã!^&c[¦^ÁÔ[Ė
	Öā^c&@Á⊤ÁQ•¦æ^ ÁÞ^••ā^Á&æcc ^Áà˘^^¦	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Õ¦æ}cÁŒà¦Á⊤ã}}ã^Á&àc{\¦	Š[•ÁŒ}*^ ^•ÁÖã!^&c[¦^ÁÔ[È

<u>MYUf</u>	<u>IgYg</u>	<u>Gc i fWY</u>
FJGJ	Ó¦^} *æ¦c}^¦ÅPæ} }æ@ÅT ¦•	Š[●ÁŒ}*^ ^●ÁÖ
	Ó¦^} *æ¦c}^¦ÁSæc@ÁØ	Š[•ÁŒ}*^ ^•ÁÖ
	ÓČåiæ}ÁÒ iÁÙæ¦æ@Á& [Á& }¦	Š[•ÁŒ}*^ ^•ÁÖ
	Y^ã•à^¦*ÁQ•æå^¦•Á@	Š[●ÁŒ}*^ ^●ÁĊ
	Y ^ã•à^¦*ÁRæ&\Á• • { }Á¦	Š[•ÁŒ}*^ ^•ÁÖ
	Y^ã•à^¦*ÁT^^¦Á] {à!Á!	Š[•ÁŒ}*^ ^•ÁÖ
	Y ^ã•à^¦*ÁÙ^ çãæÁ∙ • å^Á¦	Š[●ÁŒ}*^ ^●ÁĊ
FJGI	Ó¦^ { *æ¦å^}^¦ÁPæ}}æ@Á@	Š[•ÁŒ}*^ ^•ÁÖ
	Ó¦^ { *æ¦å^}^¦ÁSæc^Á¦	Š[•ÁŒ}*^ ^•ÁÖ
	0	Š[●ÁŒ}*^ ^●ÁĊ

i) Ôh^1] 3&^liöà^\*, |^^ & Qh^0] i) Ôh^1] 3&^liöà^\*, |^^ & Qh^0] i) Ôh^1] 3&^liöà^\*, |^^ & Qh^0] i) Ôh^1] 3&^liöh^\*, |^^ & Qh^0] 3&^liöh^\*, |^^ & Qh^0] i) ôh^1] 3&^liöh^\*, |^^ & Qh^0] 3&^liöh^\*, |^^ & Qh^0] 3&^lioh^\*, |

#### IJÎÏ€GHËÍ

## 58>C=B=B; DFCD9FHM 89H5=@

V@^Á~[||[\_i}\*AŒåb[i}i}\*AÚ¦[]^¦c^Áæåå¦^••^•A\_^\^k!^•^æ¦&@^åÁ~[!Ác@i•A¦^][¦cÉÁÁÖ^cæi|^åÁ~i}åi}\*•Áæ¦^A]¦[çiå^åÁ ~['Á^æ&@Áæåå!^••È

:=B8=B;G

#### <u>9'%GH</u>

#### &'\$&``9`%GH

<u>MYUf</u>	<u>IgYg</u>	<u>Gc i fWY</u>
FJJ€	RWÞÒÙÁÓÒŒWVŸÁÙŒŠUÞ	Úæ&ā~ā&ÅÓ^
FJÌÎ	RWÞÒÙÁÓÒŒWVŸÁÙŒŠUÞ	Úæ&ā~ā&ÁÓ^
FJÌF	RWÞÒÁÙÁÓÒŒWVŸÁÙŒŠUÞ	Úæ&ā~ā&ÁV^ ^]@[}^
FJÏF	R`}^•ÁÓ^æ`c^ÁÙæ [}	Úæ&ā~ā&ÁV^ ^]@[}^
FJÎG	R`}^•ÁÓ^æ`c^ÁÙæ [}	Úæ&ā~ā&ÁV^ ^]@[}^
FJIG	Ô@æ:æ¦[ÁÖ[¦æÁT¦•Áà^æ˘c^Á•@[]	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Ô@æ:æ¦[ÅŠ[`å•ÅÕÅÖ[¦æÅà `^Å]¦å}c^¦ÅTYÖ	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
FJHÏ	ÜÒŸÒÙÁÚæ` â}^Áà^æ`c^Á•@[]	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
FJGJ	Øä} \^ ÅÞæc@æ}ÅŒ} }æÅàæ¦à^¦	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
FJGI	Øi}\^ ÁÞæc@æ}Åàæ¦à^¦	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È

#### &'\$(``9`%GH

#### <u>MYUf</u> <u>IgYg</u>

FJÏF	Τå&\^^•ÅÔæ~^	Úæ&ã~ã&Å∨^ ^ ] @ [ } ^
FJÎG	<b>Τ</b> å&\^^•ÅÔæ~^	Úæ&ã~ã&Å∨^ ^ ] @ [ } ^
FJIG	Þ[c[ { äÁÞå¦ [•@āÁ&  [Á&  } ¦	Š[●ÅŒ}*^ ^●ÅÖã¦^&c[¦^ÅÔ[È
	Þæc[{ā́√[•@åÁ&[[\	Š[●ÅŒ}*^ ^●ÅÖã¦^&c[¦^ÅÔ[È
FJHÏ	Þ[c[ { äÁÞÁ& [Á]¦•¦	Š[●ÅŒ}*^ ^●ÅÖã¦^&c[¦^ÅÔ[È
FJHH	Þ[c[ { äÁÞå¦ [•@āÁ&  [Á&  } ¦	Š[●ÅŒ}*^ ^●ÅÖã¦^&c[¦^ÅÔ[È
FJGJ	Þ[c[ { āÁ ÞÁÙÁ& [Á& }¦	Š[●ÅŒ}*^ ^●ÅÖã¦^&c[¦^ÅÔ[È
FJGI	Þ[c[ { äÁÞå¦ [•@āÁcæā  [ ¦	Š[●ÅŒ}*^ ^●ÅÖã¦^&c[¦^ÅÔ[È

#### &'\$\*``9`%GH

#### <u>MYUf</u> <u>IgYg</u>

FJÌÎ	ŦÒÝQÔUÁÔQVŸÁÓŒÜÓÒÜÁÙPUÚ
FJÌF	TÒÝQÔUÁÔQVŸÁÓŒÜÓÒÜÁÙPUÚ
FJÏF	Xi&c[¦•ÁÓæ¦à^¦ÁÙ@[]
	T^åi}æÁP^¦{æ}ÁÔ
FJÎG	Þ`}^:ÅÔæ¦{^}
	T^åi}æÁP^¦{æ}ÅÔ
FJIG	Ó^ác&@ÁPæ¦!^ÁR^}}ǎ^Á0}å^

Ó^āc&@ÁPæll^ÁR^}}ā^ÁQ}å^

Úæ&ā~ā&ÁÓ^|| Úæ&ā~ā&ÁV^|^]@[}^ Úæ&ā~ā&ÁV^|^]@[}^ Úæ&ā~ā&ÁV^|^]@[}^ Úæ&å~å&ÁV^|^]@[}^ Úæ&å~å&ÁV^|^]@[}^ Š[•ÁŒ}\*^|^•ÁÖã!^&c[!^ÁÔ[È

#### <u>GcifWY</u>

<u>GcifWY</u>

<u>MYUf</u>	<u>I gYg</u>	<u>Gc</u>
FJIG	Ó^āc&@Á¥ {Á& [Á& }¦	Š[•
	ÙVÒÜÞÁ⊤æ¦\Á]@æ¦{ÁS^^●ÁBÁÙc¦^æ¦	Š[•
	ÙVÒÜÞÁY [ -ÁPæ}}æ@Á]}cl	Š[•
FJHÏ	Þæ\æ{`¦æÁVæ{äåÁP啿\^Áå¦^Á*å•	Š[
	ÙVÒÜÞÁTæ¦\Á]@æ¦ {	Š[
	ÙVÒÜÞÁY [ -ÁPæ}}æ@Á]}cl	Š[•
FJGJ	VŒŸŠUÜÁ₽^¦ {	Š[•
	Ó¦æç^¦ {	Š[
FJGI	P[  æ}å^¦ⅈℚ∙æåæ¦^ⅈ { ^æс∙	Š[

#### &'\$,<sup>..</sup>9<sup>.</sup>%GH

#### <u>MYUf</u> <u>IgYg</u>

FJJ€	XŧÔSŸÙÁÜÒÙVŒWÜŒÞV
FJÌF	ŠŒÁVUӌ܌ÁÜÒÙVŒWÜŒÞV
FJÏF	Ò ÁRæ¦åâ}ÁÜ^∙cæ`¦æ}c
FJIG	ÓÜUYÞÁP^}!^ÁRÁTÁÔæ¦¦ā^ÁPÁbæ}
	Ôæ { ā Á⊤ā  ā^Á ¸ ā ÁÒ { ā Á*¦ [
FJHÏ	ÓÜUYÞÁP^}¦^ÁÔæ¦¦ǎ^Ábæ}
	Š^@¦^¦Á₽^ { ^}ÅÚæ` ã}^Å*¦[
FJHH	P[  æ}å^¦ÁÜ^à^&&æÅ¸ĩåÅQ∙æå[¦^
FJGJ	₽UŠŠŒÞÖÒÜÁÜ^à^&&æÁ¸iåÅQ∙æå[¦^
	Ù [[c•\^ÁÓ^}bÁÜčc@Á&[}~^

#### &'%\$``9`%GH

<u>MYUf</u>	<u>IgYg</u>	<u>Gc i fWY</u>
FJJ€	ÓQÜTŒÞÁPÒÔVUÜÁTÖ	Úæ&ã~ã&ÅÓ^
	ÒŒÙVÁ T Ò ÖQÔŒŠÁÕ Ü U W Ú	Úæ&ā-ā&ÅÓ^
FJÌÎ	ÓQÜTŒÞÁPÒÔVUÜÁTÖ	Úæ&ā-ā&ÅÓ^
	ÒŒÙVÁ T Ò ÖQÔŒŠÁÕ Ü U W Ú	Úæ&ā-ā&ÅÓ^
FJÌF	ŎŒÙVÁŦŎÖŧÔŒŠÁÕÜIJWÚ	Úæ&ā-ā&ÁV^ ^]@[}^
FJÏF	På^•@å { æÅŒ∙æä&@åÁÙÅ⊤Ö	Úæ&ā-ā&ÁV^ ^]@[}^
FJÎG	På^•@å { æÁŒ∙æä&@åÁÙÁ⊤Ö	Úæ&ā-ā&ÁV^ ^]@[}^
FJIG	Y [●@\[¦ÁR^●`]ÁÖ[¦æÁ][` c¦^	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
FJHÏ	Ò•&æ\[~~ÁY {ÁTæ¦^Á][` c¦^	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
FJGJ	Yæ•@\[çåQ¦çå}*Á& \Á¦	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
FJGI	Yæ•@\[çÁÖ[¦æÁT¦•Á&[[\Á¦	Š[•ÁŒ}*^ ^•ÁÖä!^&c[¦^ÁÔ[È
	Yæ•@\[cÁRčlǎč•Á@	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È

#### <u>Gc i fWY</u>

Š[•ÅŒ}\*^|^•ÅÖå!^&c[!^ÅÔ[Ė Š[•ÅŒ}\*^|^•ÅÖå!^&c[!^ÅÔ[Ė Š[•ÅŒ}\*^|^•ÅÖå!^&c[!^ÅÔ[Ė Š[•ÅŒ}\*^|^•ÅÖå!^&c[!^ÅÔ[Ė Š[•ÅŒ}\*^|^•ÅÖå!^&c[!^ÅÔ[Ė Š[•ÅŒ}\*^|^•ÅÖå!^&c[!^ÅÔ[Ė Š[•ÅŒ}\*^|^•ÅÖå!^&c[!^ÅÔ[Ė Š[•ÅŒ}\*^|^•ÅÖå!^&c[!^ÅÔ[Ė Š[•ÅŒ}\*^|^•ÅÖå!^&c[!^ÅÔ[Ė Š[•ÅŒ}\*^]^•ÅÖå!^&c[!^ÅÔ[Ė

#### <u>Gc i fWY</u>

Úæ&&=&&AÓ^|| Úæ&&=&&AV^|^]@[}^ Úæ&&=&&AV^|^]@[}^ Š[=ACE}\*^|^=AÖ&!^&C[!^AÔ[Ė Š[=ACE}\*^|^=AÖ&!^&C[!^AÔ[Ė Š[=ACE}\*^|^=AÖ&!^&C[!^AÔ[Ė Š[=ACE}\*^|^=AÖ&!^&C[!^AÔ[Ė Š[=ACE}\*^|^=AÖ&!^&C[!^AÔ[Ė Š[=ACE}\*^|^=AÖ&!^&C[!^AÔ[Ė Š[=ACE}\*^]^=AÖ&!^&C[!^AÔ[Ė

> |^•ÅÖä¦^&c[¦^ÅÔ[È |^•ÅÖä¦^&c[¦^ÅÔ[È |^•ÅÖä¦^&c[¦^ÅÔ[È |^•ÅÖä¦^&c[¦^ÅÔ[È

&'	%%`	. 9	'%GH	
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<u>MYUf</u>	<u>I gYg</u>	<u>GcifWY</u>
FJJ€	ÜŒŦUÙÁŒŠÓÒÜVU	Úæ&ā~ā&ÅÓ^
FJÌÎ	ÜŒŦUÙÁŒŠÓÒÜVU	Úæ&ā~ā&ÅÓ^
FJÌF	ÜŒŦUÙÁŒŠÓÒÜVU	Úæ&ā-ā&ÁV^ ^]@[}^
FJÏF	Üæ{ [●ÁŒ à^¦c[	Úæ&ā-ā&ÁV^ ^]@[}^
	Ú æ&^}&ä[ÁV[}ã	Úæ&ā-ā&ÁV^ ^]@[}^
	Ú^¦^:ÅTæ}`^ æ	Úæ&ā~ā&ÁV^ ^]@[}^
	Ú æ&^}&i[Áئæ}\	Úæ&ā~ā&ÅV^ ^]@[}^
FJÎG	Ú æ&^}&i[ÁV[}i	Úæ&ā~ā&ÅV^ ^]@[}^
	Ú æ&^}&i[ÅØ¦æ}\	Úæ&ā~ā&ÁV^ ^]@[}^
FJIG	TŒÜÙ₽ÁTæ¦^ÁÒÁc^]ǎ∙c	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[Ė
	TŒÜÙ₽Á₽榦^ÁŒÁŠ`&^ÁŒÁ]}c¦	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[Ė
FJHÏ	Þ^ { [¦Å⊤[¦¦ã•Å]@æ¦ {	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[Ė
	Þ^ { [ ¦ÅTæ¢ÅÓ^¦c@æÅ¦^ælÅ^æc	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[Ė
	Þ^ { [ ¦ÁŠā  āæ } Áæ&&c	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[Ė
	Þ^ { [ ¦ÁÒ•c@^¦Áà\ ] ¦	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[Ė
FJHH	Þ^ { [ ¦ÁŠi  iæ}}ÁÔÁà \ ] ¦ÁZæ  ^¦àæ&@ÁÚæ]^¦ÁÔ[	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[Ė
FJGJ	Þ^ { [ ¦^ÁŠä  ǎæ}}Á& ∖	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[Ė
	Þ^ { [ ¦^ÁÒ•c@^¦Á&  \	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
FJGI	ÓQÜÖÁT&@ ÁY&¦^Á*å•	Š[●ÁŒ}*^ ^●ÁÖã¦^&c[¦^ÁÔ[Ė

#### &'%'``9`%GH

## F, F F ין צ <u>MYUf</u> <u>IgYg</u> <u>Gc i fWY</u>

FJJ€	ÙŒÞÔ₽ÒZÁQÞÔU T ÒÁVŒÝÁÙÒÜXQÔÒ	Úæ&ā-ā&ÁÓ^
FJÌÎ	ŦIJÞVŒÞIJĺØŒÔWÞÖIJĺÙĺŰŠĺÒÙV	Úæ&ā-ā&ÁÓ^
FJÌF	ŦIJÞVŒÞŒÁØŒÔWÞÖIJÁÙÁÜŠÁÒÙV	Úæ&ā-ā&ÁV^ ^]@[}^
FJÏF	Ü ˜ã∶ÁÞā& \ÁÚÁ¦ Á^∙c	Úæ&ā-ā&ÁV^ ^]@[}^
	T[¦æ ^●ÅŒ}*^ æ	Úæ&ā-ā&ÁV^ ^]@[}^
FJÎG	Ü~ā:ÁÞā&\ÁÚÁ¦ Á^•c	Úæ&ā-ā&ÁV^ ^]@[}^
	Ræi { ^ÁÜ [ ●^Á⊤æ¦å^	Úæ&ā-ā&ÁV^ ^]@[}^
FJIG	Yæ¦}^&\ÁÕ^[Áæå¦&¦-c¸\¦	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Yæ¦}^&\ÅØ¦^å∖	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Yæ¦}^&\ÁÓ^¦c@æĺ¸ãåÁP^}¦^	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
FJHÏ	Υ ÒQÙÙÁΤ [ ¦¦ā•	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Y ÒQÙÙÁÕ¦æ&^	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Y ^ā••ÁÔ^ ăæÁ⊤¦•	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	ÙWÞĺÔ@^¸ĺ@æ}åĺ }å^	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È

#### &'%)``9`%GH

<u>MYUf</u>	<u>I gYg</u>	<u>GcifWY</u>
FJÌÎ	ÜQZZUÁÙÁÙVÒÜÒUÙ	Úæ&ā~ā&ÅÓ^
FJÌF	ÜQZZUÙÁÙVÒÜÒUÙ	Úæ&ā~ā&ÅV^ ^]@[}^
FJÏF	T [ }cæ} [ÁØæ&`}å[ÁÙÁ¦ Á^∙c	Úæ&å~å&ÅV^ ^]@[}^
	⊤[}cæ}[ÁØæ&`}å[ÁÙÁ¦ Á^∙c	Úæ&ā-ā&ÁV^ ^]@[}^
	Τ[¦æ}ÅÜ[•^ÅΤ¦•	Úæ&ā-ā&ÁV^ ^]@[}^
FJÎG	Tælçā}ÁÓ`ā å^l∙	Úæ&ā~ā&ÁV^ ^]@[}^
	⊤[}cæ}[ÁØæ&`}å[ÁÙÁ¦ Á^∙c	Úæ&ā-ā&ÁV^ ^]@[}^
	T [ }cæ } [ÁØæ&` }å [ÁÙÁ¦ Á^∙c	Úæ&ā-ā&ÁV^ ^]@[}^
	Τ[¦æ}ÅÜ[•^ÅΤ¦•	Úæ&ā-ā&ÁV^ ^]@[}^
FJIG	TQŠŠÒÜÁŒà¦ÁÙæåå^Á˘]@[	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[
	T0ŠŠÒÜÁR[•Á& \	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[
FJHÏ	Ti  ^¦ÁŒà¦ÁÙæåi^Á~]@[	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[
FJHH	⊤ā  ^¦ÁŒà¦ÁÙæåā^Á&àc { ∖¦	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[
	T≬ŠŠÒÜÁئ^åæÁ& ∖	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[

#### &'%,<sup>..</sup>9<sup>.</sup>%GH

<u>MYUf</u>	<u>I gYg</u>
FJJ€	ŒÔŒÚWŠÔUÁÓŒSÒÜŸ
FJÌÎ	ŒÔŒÚWŠÔUÁÓŒSÒÜŸ
FJÌF	ŒÔŒÚWŠÔUÁÓŒSÒÜŸ
FJÏF	Œ&æ]` &[ÅÓæ\^¦^
FJÎG	Ùæ åæ}æ∙ÅÓæ\^¦^
FJGJ	₽ã* ~&@ãÁÙÁ*¦[

#### &'&%``9`%GH

<u>MYUf</u>	IgYg	<u>Gc i fWY</u>
FJJ€	ÕŒŠIÔIŒÁŠUWIÒÁRÜ	Úæ&ā~ā&ÁÓ^
	ԌٌÁÔŒÜŧUÔŒÁÜÒÙVŒWÜŒÞV	Úæ&ā~ā&ÅÓ^
	ԌٌÁÔŒÜŧUÔŒ	Úæ&ā~ā&ÅÓ^
FJÌÎ	ԌٌĺԌ܊IJÔŒĺÜÒÙVŒWÜŒÞV	Úæ&ā~ā&ÅÓ^
FJÌF	TÒÙŒÁԌ܊UÙÁÚ	Úæ&ā~ā&ÁV^ ^]@
	ԌٌÁÔŒÜŧUÔŒÁÜÒÙVŒWÜŒÞV	Úæ&ā~ā&ÁV^ ^]@
	ԌٌÁÔŒÜŧUÔŒÁÜÒÙVŒWÜŒÞV	Úæ&ā~ā&ÁV^ ^]@
FJÏF	Ôæ¦ã[&æÁÔæ~^	Úæ&ā~ā&ÁV^ ^]@
FJÎG	Ÿà榦æÁÜ[●^	Úæ&ā~ā&ÁV^ ^]@
	ŠæÁQ}åicæÁÔæ~^	Úæ&ā~ā&ÁV^ ^]@
	Ôæ¦ā[&æÁÔæ~^	Úæ&ā~ā&ÁV^ ^]@

[ È [È [È ſÈ [È

#### <u>GcifWY</u>

Úæ&ā~ā&ÁÓ^|| Úæ&ā~ā&ÁÓ^|| Úæ&ā~ā&ÁV^|^]@[}^ Úæ&ā~ā&ÁV^|^]@[}^ Úæ&ā~ā&ÁV^|^]@[}^ Š[•ÁŒ}\*^|^•ÁÖã¦^&c[¦^ÁÔ[È

> {} 0[}^ 0[}^ 0[}^ 0[}^ 0[}^ 0[}^

<u>Gc i fWY</u>

Úæ&ā~ā&ÁÓ^||

#### &'&&``9`%GH

<u>MYUf</u>	<u>IgYg</u>	<u>GcifWY</u>
FJÌF	ÓŒÜÜUÞÁ܌،ҊÁÜŒŦŧÜÒZ	Úæ&ā~ā&ÁV^ ^]@[}^
FJÏF	T [ ¦æ ^•ÁÓ^ }bæ { ä}ÅÖ	Úæ&ā~ā&ÁV^ ^]@[}^
FJÎG	Œ}*` [ÁTæ¦iæ	Úæ&ā~ā&ÁV^ ^]@[}^
	Œçā}æÁÜ[•æ¦ā[ÁÚ	Úæ&ā~ā&ÁV^ ^]@[}^
	T [ ¦^ } [ ÅR [ •^ÅŒ	Úæ&ā~ā&ÁV^ ^]@[}^
FJIG	Œç^ æ¦ÅR[•^ÁÚÁŠ^[}[¦Å{[} ˘{^}c•	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
FJHH	Tæ¦cā}^:ÁŒ àcÁÔ[}}ā^Á{č•ā&āæ}	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[Ė
	Ü[ĭ å•ÁŒ}c@[}^Á{ å	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È

#### &'&'`'9'%GH

<u>MYUf</u>	<u>l gYg</u>	<u>Gc i fWY</u>
FJJ€	ÔUUSIÒÙÁTSV	Úæ&ā~ā&ÁÓ^
FJÌÎ	ÔUUSIÒÙÁTSV	Úæ&ā~ā&ÁÓ^
FJÌF	ΤιΑ̈́ΨŒÞÔΡΩVU	Úæ&ā~ā&ÁV^ ^]@[}^
	ŎŒÙVÙſŎŎŀÙŎÜXſÔŎŀŒſŨŀÔIJÞÖſVÞÕŀBŀ ÜŎØÜſÕVÞ	Úæ&i~i&ÁV^ ^]@[}^
FJÏF	^>:#\$: #ÅÜ^& ÅÒ•cæc^	Úæ&ā~ā&ÁV^ ^]@[}^
	Õ[¦å[}ÁV^¦{ &^ÅÔ[}c¦[ ÁQ}&	Úæ&ā~ā&ÁV^ ^]@[}^
FJÎG	T^¦&æå[ÁBÁÙ[}●ÁŒ]] ãæ}&^●	Úæ&ā~ā&ÁV^ ^]@[}^

#### &'&)``9`%GH

#### <u>MYUf</u> <u>IgYg</u> FJJ€ Τ⊮ÜŒÞÔ₽∿VU

FJÌÎ	ΤΙΑ̈́ÜŒÞÔΡΩVU	Úæ&ā-ā&ÅÓ^
FJÌF	ΤΙΑ̈́ÜŒÞÔΡΩVU	Úæ&ā-ā&ÁV^ ^]@[}^
FJÏF	Ò∣ÁV ˘]ã}æ { àæ	Úæ&ā~ā&ÁV^ ^]@[}^
FJÎG	Ò∣ÁV˘]ã}æ{àæ	Úæ&ā~ā&ÁV^ ^]@[}^

#### &'&-``9`%GH

<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
FJJ€	TŒÜQUÁÙÁÚŠŒÔÒ	Úæ&ā-ā&ÅÓ^
FJÌÎ	TŒÜQUÁÙÁÚŠŒÔÒ	Úæ&ā~ā&ÅÓ^
FJÌF	TŒÜQUÁÙÁÚŠŒÔÒ	Úæ&ā~ā&ÁV^ ^]@[}^
	TŒÜQUÁÙÁÚŠŒÔÒ	Úæ&ā~ā&ÁV^ ^]@[}^
FJÏF	Üã[ÅÕ¦æ}å^ÅÔæ~^	Úæ&å~å&ÅV^ ^]@[}^
FJÎG	Üã[ÅÕ¦æ}å^ÅÔæ~^	Úæ&ā~ā&ÁV^ ^]@[}^
FJIG	XŒŠÒÞÔŒÁÜ [•^Á¦^•c¦	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
FJGJ	Ô[[]^\ÁŒà\Á~`\}	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
FJGI	ÚÒÞÞŸÁV@^[Á^ ^&cÁ-å¢c~`¦^•	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È

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<u>MYUf</u>	<u>IgYg</u>
FJÌÎ	ØQÜÙVÁBÁÙUVUÁÓŒÜÓÒÜÁÙPUÚ
FJÌF	ØQÜÙVÁBÁÙUVUÁÓŒÜÓÒÜÁÙPUÚ
FJÏF	Øã¦•cÁBÁÙ[c[ÁÓæ¦à^¦ÁÙ@[]
FJÎG	Øã¦•cÁBÁÙ[c[ÁÓæ¦à^¦ÁÙ@[]
FJHÏ	Øã:åæ ^ÁRæ&\ÁŠã  ā^Áàæcc^¦ā^•
FJGJ	Ó`¦^ [~ÅÔ@æ•ÅŒ}}å^Åàæ¦à^¦

#### &''''9'%GH

3 //01	1
<u>MYUf</u>	<u>I gYg</u>
FJÏF	ÙŠUŒÞÙÁÖÜŸÁÔŠÒŒÞÒÜÙÁBÁŠŒWÞÖÜŸ
FJÎG	Ù [æ}∙ÁÖ¦^ÁÔ ^æ}^!∙ÁBÁŠæ`}å¦^
FJIG	Óæ\ã}ÅRæ&[àÅÙæ¦æ@Å&àc{\¦
FJHH	Ò •c^ā}ÁÙ[ Á¸ā}å[¸Á•@æå^Á{~¦
FJGJ	TŒÜVQÞÁŒà¦ÁÒçæÁcæä [¦
FJGI	Ó^¦}•c^ā}ÁÚ@ā ā]Ácæā [¦

#### &'')<sup>...</sup>9<sup>.</sup>%GH

<u>MYUf</u>	<u>IgYg</u>
FJJ€	TŒRUÜÁŠQÛWUÜÁÙVUÜÒÙ
FJÌÎ	TŒRUÜÁŠQÛWUÜÁÙVUÜÒÙ
FJÌF	TŒRUÜÁŠQÛWUÜÁÙVUÜÒÙ
FJIG	Sæ∙`*¦æ ÁÒå¸ÁÙÁŸ[^\[Á*¦[
FJHÏ	S˘∙˘{äÁŸæ^[\[Á*¦[
FJHH	Væà^&@åÞå*¦[
FJGI	Ù [[c•\^ÁÓ^}bÁ{`ĕã&ãæ}Á¦
	ÔUPÞÁP^ { æ}Ácæil[¦Á¦

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FJÌÎ	RUÙÒÚPÁÙÁTÒÞÁÙÁY	ÒŒÜ

#### &(\$\$``9`%GH

<u>MYUf</u>	<u>IgYg</u>
FJJ€	ÙUVUÁÖÜWÕÁÔU
FJÌÎ	ÙUVUÁÖÜWÕÁÔU
FJÌF	ÙUVUÁÖÜWÕÁÔU
FJÏF	Ù[c[ÁÖ¦˘*ÁÔ[
FJÎG	Ù[c[ÁÖ¦˘*ÁÔ[
FJHÏ	Ø\`ÙP`O`ÜÂ\•æå[¦^Áå¦`*•

#### <u>Gc i fWY</u>

Úæ&ā~ā&ÁÓ^
Úæ&ā~ā&ÁV^ ^]@[}^
Úæ&ā~ā&ÁV^ ^]@[}^
Úæ&ā~ā&ÁV^ ^]@[}^
Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È

#### <u>Gc i fWY</u>

Úæ&&&&ÅV^|^]@[}^ Úæ&&&&&ÅV^|^]@[}^ Š[•ÅŒ}\*^|^•ÅÖ&!^&c[!^ÅÔ[Ė Š[•ÅŒ}\*^|^•ÅÖ&!^&c[!^ÅÔ[Ė Š[•ÅŒ}\*^|^•ÅÖ&!^&c[!^ÅÔ[Ė Š[•ÅŒ}\*^|^•ÅÖ&!^&c[!^ÅÔ]Ė

#### <u>Gc i fWY</u>

Úæ&ā-ā&ÅÓ^
Úæ&ā-ā&ÁÓ^
Úæ&ā-ā&ÁV^ ^]@[}^
Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È

#### <u>GcifWY</u>

Úæ&ā~ā&ÁÓ^||

#### <u>GcifWY</u>

Úæ&&-&&ÅÓ^|| Úæ&&-&&ÅÓ^|| Úæ&&-&&ÅV^|^]@[}^ Úæ&&-&&ÅV^|^]@[}^ Úæ&&-&&ÅV^|^]@[}^ Š[•ÅŒ}\*^|^•ÅÖå!^&c[!^ÅÔ[Ė

IJÎÏ€GHËÍ

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υæ		· .WE	I.

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<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
FJGJ	₽QŠŠÁÙcæ} ^^ÁÜÁTæ^ÁÒÁå¦˘*∙	Š[●ÁŒ}*^ ^●ÁÖã¦^&c[¦^ÁÔ[È
FJGI	PQŠŠÁÙcæ} ^^ÁÜÁå¦`*	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
&(\$' <sup>``</sup> 9'%GH		

<u>MYUf</u>	<u>IgYg</u>	<u>Gc i fWY</u>
FJJ€	ŠIÓÜÒÜIŒÁTÒÝIÔUÁÞWÒXUÁÖIÙÔUVÒÔŒ	Úæ&ā~ā&ÁÓ^
FJÌÎ	ŠĮÓÜÒÜĮŒĹŦÒÝĮÔUĹÞWÒXUĹÖŲÙÔUVÒÔŒ	Úæ&ā~ā&ÁÓ^
FJÌF	ŎŠÁÜÒŸÁÔIJŠŨŦŒÞÁÜÒÙVÜÞV	Úæ&ā~ā&ÁV^ ^]@[}^
	ŠĮÓÜÒÜQŒÁŦÒÝĮÔUÁÞWÒXUÁÖQÙÔUVÒÔŒ	Úæ&ā~ā&ÁV^ ^]@[}^
FJÏF	U , IÁV@^	Úæ&å~ã&ÁV^ ^]@[}^
FJÎG	U , IÁV@^	Úæ&å~ã&ÁV^ ^]@[}^

#### &(\$(``9`%GH

<u>MYUf</u>	<u>IgYg</u>	<u>GcifWY</u>
FJJ€	ŬUVUÁT Ò ÖQÔŒŠÁÕ ÜUWÚ	Úæ&ā-ā&ÁÓ^
	ŬUVUÁT Ò ÕQÔŒŠÁÕ ÜUWÚ	Úæ&ā-ā&ÁÓ^
FJÌF	ŬUVUÁT Ò ÕQÔŒŠÁÕ ÜUWÚ	Úæ&ā-ā&ÁV^ ^]@[}^
	ŬUVUÁT Ò ÕQÔŒŠÁÕ ÜUWÚ	Úæ&ā-ā&ÁV^ ^]@[}^
	ŒÓÜŒŦÙIJÞÁŦÁŦÖÁÙUVUÁŦÒÖQÔŒŠÁ ÕÜUWÚ	Úæ&&&&\V^ ^]@[}^
	ŒÓÜŒŦÙIJÞÁŦÁÖÜÁÙUVUÁŦÒÖQÔŒŠÁ ÕÜUWÚ	Úæ&&&&\V^ ^]@[}^
FJÏF	Ù[c[ÁT^åi&æ ÁÕ¦[č]	Úæ&ā-ā&ÁV^ ^]@[}^
	Ù[c[ÁT^åi&æ ÁÕ¦[č]	Úæ&ā-ā&ÁV^ ^]@[}^
	Œà¦æ{•[}ÁTÁTÖÁÙ[c[ÁT^åi&æ ÁÕ¦[č]	Úæ&ā-ā&ÁV^ ^]@[}^
	Œà¦æ{•[}ÁTÁÖ¦ÁÙ[c[ÁT^åi&æ ÁÕ¦[č]	Úæ&ā-ā&ÁV^ ^]@[}^
FJÎG	Ù[c[ÁT^åi&æ ÁÕ¦[č]	Úæ&ā-ā&ÁV^ ^]@[}^
	Ù[c[ÁT^åi&æ ÁÕ¦[č]	Úæ&ā-ā&ÁV^ ^]@[}^
	Œà¦æ{•[}ÅTÅÖ¦ÅÙ[c[ÅT^åi&æ ÅÕ¦[č]	Úæ&ā-ā&ÁV^ ^]@[}^
	Œà¦æ{•[}ÁTÁÖUÁÙ[¢[ÁT^åå&æ ÁÕ¦[č]	Úæ&ā-ā&ÁV^ ^]@[}^
FJIG	Œ•[[ÁÙ@~}ā&@ā¦[ÁR[}^Á& [Á& }¦	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
FJHÏ	Œ•[[ÁÙ@`{&&@&![ÁŸ[}^Á& [Á& }¦	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
FJGI	Ùæi]ÅÕ^[Åå¦^Å*å∙	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[Ė
(\$)	GH	

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<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
FJJ€	ÓÒÜÞWÖÒZÁÜUÓÒÜVU	Úæ&ā-ā&ÅÓ^
FJÏF	ԌٌÁŒÜŒÕUÞÁ¦^&¦åÁ•@[]	Úæ&ā~ā&ÅV^ ^]@[}^
FJÎG	Ù@i}å[ÁÙcǎi[Á]@[c*¦]@¦	Úæ&å~å&ÅV^ ^]@[}^

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<u>I gYg</u>	<u>Gc i fWY</u>
PUÞÖŒÁØWRQÒ	Úæ&ä~ã&ÅV^ ^]@[}^
₽[}åæÁSæc∙`\ā	Úæ&ā~ā&ÁV^ ^]@[}^
Ü[{[ÁÕ˜æåæ ઁ]^ÁR˜æ}æ	Š[●ÁŒ}*^ ^●ÁÖã¦^&c
Ü[{[ÁÒ ā•ÁŠǐ]^Á æà	Š[●ÁŒ}*^ ^●ÁÖã¦^&c
Óæ**^ÁYæ c^¦ÁÓæ**^ÁÓ¦[•Á¦	Š[●ÁŒ}*^ ^●ÁÖã¦^&c
Ó#**^ÁÒ¦}^•cÁÓæ**^ÁÓ¦[•Á¦	Š[●ÁŒ}*^ ^●ÁÖã¦^&c
	<u>IgYg</u> PUÞÖŒÁØWRQÒ P[}åæÁSæc•`\á Ü[{[ÅÕ̃æåæ `]^ÁR`æ}æ Ü[{[ÅÒ[å•ÅŠ`]^Å]æà Óæ**^ÅYæ c^!ÅÓæ**^ÅÓ![•Å! Óæ**^ÅÒ;}^•cÅÓæ**^ÅÓ;[•Å]

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## <u>Gc i fWY</u>

<u>Gc i fWY</u> Úæ&ā~ā&ÁÓ^||

<u>Gc i fWY</u> Úæ&ā~ā&ÁÓ^|| Úæ&ā~ā&ÁÓ^||

<u>MYUf</u>	<u>I gYg</u>	<u>GcifWY</u>
FJÌÎ	ÞŒSŒÕŒ Y ŒÅÔ	Úæ&ā-ā&ÁÓ^
FJÌF	ÞÆSÆÕŒ Y ŒÁÔ	Úæ&ā~ā&ÅV^ ^]@[}^
FJÏF	Þæ\æ*æ¸æĺÔ	Úæ&ā~ā&ÁV^ ^]@[}^
	Væ∖æ{ 覿Å⊤ã∙č^	Úæ&ā~ā&ÁV^ ^]@[}^
FJÎG	Væ∖æ{ ĭ¦æÅTã•˘^	Úæ&ā~ā&ÁV^ ^]@[}^
FJIG	XŒÙÛWÒZÁ₽^ ^}ÁT¦•	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	T^ ^}å^:أÙæ¦æ@أT¦∙	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
FJHÏ	Y PQVÒÁRæ∙ÁÚ^¦~^&cæÁà¦æ∙∙Á {  å¦	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Őæ¦&iæÅŠ`&iæ}[ÅR^}}ā^Å æà	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[Ė
FJHH	ÚÒÞŒÁÒ}¦ã˘˘^Á*æ•Á•cæÁ[]¦	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Ö^ÁŠæ}^ÁŠ^}}ÁÒÁÒ~ā^Á*æ•Á•cæ	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[Ė
	ÕŒÜÔŒÁR^}}ã^ÁT¦∙	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[Ė
FJGJ	Ù&@ æ}å^¦ÁŒ ]@[}•^ÁÙ[]@ãæÁ{^æcÁ&c¦Á@	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[Ė
FJGI	ÔUPÒÞÁRæ&[àÁ& \Á¦	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[Ė
	ÔUPÒÞÁŠæ:æ¦`•Á& \	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[Ė
	ÔUPÒÞÁÞæc@æ}Á]æã}c^¦Á¦	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[Ė
	Ò}*ā  {	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Ò}* ^{ &}}ÅŠä  ãæ}Å• • , { }ÁÓæ¦!ÅBÅÓ æã!Å!	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[Ė
	Sæ∙cÁÒ∙c^  æÁ⊤¦∙Á¦	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[Ė
	Üæ∙cÁÙc^  æÁ┰¦∙Á• ∙¸{}Á¦	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[Ė

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<u>MYUf</u>	<u>IgYg</u>
FJJ€	ÕUŠÖÒÞÁÙVŒVÒÁÒŠÒÔVÜQÔ

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<u>MYUf</u>	<u>I gYg</u>
FJJ€	ŸUÙP(ISŒZWÁS(IÞRU
FJÌÎ	ŸUÙPISŒZWÁSIÞRU

<u>MYUf</u>	IgYg	<u>Gc i fWY</u>
FJÌF	ŸUÙPISŒZWÁSIÞRU	Úæ&ā~ā&ÁV^ ^]@[}^
FJÏF	Sæ,æà^ÁS^}bi	Úæ&ā~ā&ÁV^ ^]@[}^
	V∙`à[āÅR`ā&@ā¦[	Úæ&ā~ā&ÁV^ ^]@[}^
FJÎG	Sæ,æà^ÁS^}b	Úæ&ā~ā&ÁV^ ^]@[}^
FJIG	TŒÜVQÞÒZÁÔ`&æÁT¦∙Á{æiå	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁĈ
	T^}å[∙æÁØ^lå¢ÁXål *ä}åæ	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁĈ
FJHÏ	Ü[}~`i  [ÁP^}¦^ÁÖ[¦æÁ&æ¦]	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁĈ
	Ôæ çå   [ ÁÒ ^æ } [ ¦Á T ¦•	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁĈ
	Ôæļçā   [ ÁÒ ^æ }	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁĈ
FJHH	TŒÜÛWÒZÁTÁÓ^œæ	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁĈ
FJGJ	Ùåå}^lÁR[•Á~˘ŀ,∖lÁl	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁĈ
	Ù^āå } ^ ¦ÁR [ •ÁÔ æ¦æÁ~` ¦ •Á@	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁĈ
	Šã~•&@ãc:ÁQ•ææ•ÁŒ}}æÁ&æ¦]	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁĈ
FJGI	ÔUPÞÁÒå¸åÁ]æi}c^lÁ@	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁĈ

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<u>MYUf</u>	<u>IgYg</u>	<u>Gc i fWY</u>
FJJ€	ÔPÒÞÁVQÒÞÁØW	Úæ&ā-ā&ÁÓ^
	₽ÒQÙ₽QTŒÅŒŠŒÞ	Úæ&ā~ā&ÁÓ^
	SUÁYŒÞÁSYÒŠ	Úæ&ā-ā&ÁÓ^
FJÌÎ	ÔPÒÞÁVQÒÞÁØW	Úæ&ā-ā&ÁÓ^
	SUÁYŒÞÁSYÒQ	Úæ&ā-ā&ÁÓ^
	VÙŒŴŒŎŒŦŔŸ	Úæ&ā-ā&ÁÓ^
FJÌF	I Y ŒPŒÙPŴŒŸŒSU	Úæ&ā-ā&ÁV^ ^]@[}^
	ŦŒÜWŸŒŦŒĺ₽ŒÜWÒ	Úæ&ā-ā&ÁV^ ^]@[}^
	ΡŒΤŒΤUVUΆÙΡℚΤŒÞUÁTÜÙ	Úæ&ā-ā&ÁV^ ^]@[}^
FJÏF	₽æ{æ{[c[ÁÙ@å{æ}[ÁT¦∙	Úæ&ā-ā&ÁV^ ^]@[}^
	S`å[,ÁÙ@ä:`\[ÁT¦•	Úæ&ā-ā&ÁV^ ^]@[}^
FJÎG	QC [ ÁPÁT	Úæ&ā-ā&ÁV^ ^]@[}^
	Pæ{æ{[c[ÁÙ@i{æ}[ÁT¦∙	Úæ&ā-ā&ÁV^ ^]@[}^
FJIG	T≬ŠŠÒÜÁ₽榦^	Š[●ÁŒ}*^ ^●ÁÖã¦^&c[¦
	⊤[*å ^,•\^ÁƳ[ ~	Š[●ÁŒ}*^ ^●ÁÖã¦^&c[¦
	V^¢^¦ÁÓ^}bÁŒ}}æÁ]å ¦	Š[●ÁŒ}*^ ^●ÁÖã¦^&c[¦
	V^¢^¦ÁÙæ {	Š[●ÁŒ}*^ ^●ÁÖã¦^&c[¦
FJHÏ	Őæ¦&iæÁ⊤æ¢ÁU~^∣iæ	Š[●ÁŒ}*^ ^●ÁÖã¦^&c[¦
	ÞÒY TŒÞÁŒ àc	Š[●ÁŒ}*^ ^●ÁÖã¦^&c[¦
	V¦æ*^¦ÁŒà¦ÁŸ^ccæÁ]å ¦	Š[●ÁŒ}*^ ^●ÁÖã¦^&c[¦
FJHH	ŠÒXQÞÁR [ •ÁÜ [ •^	Š[●ÁŒ}*^ ^●ÁÖã¦^&c[¦
	V¦æ*^¦ÅŒàcÅŸ^ccæÅ]å ¦	Š[●ÁŒ}*^ ^●ÁÖå¦^&c[¦

Ô[È Ô[È Ô[È Ô[È Ô[È Ô[È Ô[È Ô[È Ô[È Ô[È

#### GoifWV

ſ^ÁÔ[È ſ^ÁÔ[È ¦^ÁÔ[È ſ^ÁÔ[È ¦^ÁÔ[È **¦^ÁÔ[È ¦^ÁÔ[È** ſ^ÁÔ[È ſ^ÁÔ[È

<u>GcifWY</u>

Š[•ÅŒ}\*^\^•ÅÖå!^&c[:^ÅÔ[Ė Š[•ÅŒ}\*^\^•ÅÖå!^&c[:^ÅÔ[Ė Š[•ÅŒ}\*^\^•ÅÖå!^&c[:^ÅÔ[Ė Š[•ÅŒ}\*^\^•ÅÖå!^&c[:^ÅÔ[Ė Š[•ÅŒ}\*^\^•ÅÖå!^&c[:^ÅÔ[Ė Š[•ÅŒ}\*^\^•ÅÖå!^&c[:^ÅÔ[Ė

<u>MYUf</u>	<u>I gYg</u>
FJHH	V¦æ*^¦ÁÓ^••å^ÁT¦•
	V¦æ*^¦ÁQ¦^}^Á& \
FJGJ	ÙΡŒÚQÜUÁÙ [  Á@
	ÙTℚVPÁℚ¦^}^Á• • å^Á¦
	V㦦^ÁÔæcæ ã}æÁ¸ãåÁŒ}c[}ã[Á{^æcÁ]\¦Á@
FJGI	V¦æ*^¦ÅŒà¦æ@æ{Á{æ&@Å@

#### &(%\*``9`%GH

<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
FJJ€	ŒŠQÔQŒÁÙÁÓUWVQÛWÒÁBÁÔÜÒŒVQUÞÙ	Úæ&ā~ā&ÅÓ^
FJÌÎ	ŒŠQÔQŒÁÙÁÓUWVQÛWÒÁBÁÔÜÒŒVQUÞÙ	Úæ&ā~ā&ÅÓ^
FJÌF	ØWSWŸŒÁVÒŸŒSUÁÙÒÞÓÒQ	Úæ&ā~ā&ÁV^ ^]@[}^
FJÏF	ØWSWŸŒÁVÒŒÁÔUUSQÒÁTØÜÙ	Úæ&ā~ā&ÁV^ ^]@[}^
FJÎG	ØWSWŸŒÁVÒŒÁÔUUSQÒÁŦØÜÙ	Úæ&ā~ā&ÁV^ ^]@[}^
FJIG	V¦æ*^lÁŒàlÁŸ^ccæ	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[Ė
	Üæ∙\ã}ÁÓ^}bÁƳÁŒ}}æÁàæ\^¦	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Yæ∥^¦ÁÜ[àcÁ⊤æ¦*c	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	PÒŠŠÒÜÁÜ[àcÁŠÁ{[c[¦Á¸i}å^¦ÁÛÒÁÔ[	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
FJHÏ	S[•@ā}•\^ÁR[•Áئā^åæÁàæ\^	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[Ė
	V㦦^ÁÔæcæ ã}æÁ¸ãåÁŒ}c[}ã[Á∙{•c¦∙	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
FJHH	Ó[:ā*āæ}ÁR[@}ÁŒ¦{^}āæ}ÁŒ{ÁÓæ\^¦^	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Œ¦{^}iæ}ÅŒ{^\i&æ}ÅÓæ\^!^ÅR[@}Åæ}åÅ Ùæ{ ÅÓ[:i*iæ}Åæ}åÅÕ^[ÅP[çæ*iæ}	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
FJGJ	Tæ¦∖[ jā::ÁTæ¦&`•ÁÕ[ åā^Á*¦[	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[Ė

#### &(%+``9`%GH

<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
FJJ€	PIÒÙPITŒÍŸUÙPISU	Úæ&ā-ā&ÅÓ^
	ŬŒQVUÁVŒ TŒŸÒ	Úæ&ā~ā&ÅÓ^
FJÌÎ	ÙŒŨVUÁVŒ TŒŸÒ	Úæ&ā~ā&ÅÓ^
	PIÒÙPITŒÁŸUÙPISU	Úæ&ā~ā&ÅÓ^
FJÌF	PIÒÙPITŒÁŸUÙPISU	Úæ&ā~ā&ÁV^ ^]@[}^
	ŬŒQVUÁVŒ TŒŸÒ	Úæ&ā~ā&ÁV^ ^]@[}^
FJÏF	₽ā^•@ā { æÁŸ [ •@ā\ [	Úæ&ā~ā&ÁV^ ^]@[}^
	Ö[àæ∙@iÁV	Úæ&ā~ā&ÁV^ ^]@[}^
FJÎG	Pā^∙@ā { æÅŸ [ å&@åÅÕ	Úæ&ā~ā&ÅV^ ^]@[}^
	Ö[àæ∙@å∕V	Úæ&ā~ā&ÅV^ ^]@[}^
FJGJ	Ú[*[_āc:ÁT[¦¦ā•ÁÓ^¦c@æÁàæ\^¦Á@	Š[●ÁŒ}*^ ^●ÁÖã¦^&c[¦^ÁÔ[È
FJGI	Ù&@ ^••ã} *^¦ÁRæ\^Á] !•¦Á¦	Š[•ÁŒ}*^ ^•ÁÖä!^&c[¦^ÁÔ[È

<u>MYUf</u>	<u>IgYg</u>

FJGI Þ[^ælåÁØÁ|æàÁl

#### &(%-``9`%GH

#### <u>Gc i fWY</u> Š[•ÁŒ}\*^|^•ÁÖã¦^&c[¦^ÁÔ[È

#### GcifWY

<u>MYUf</u>	<u>IgYg</u>	<u>Gc i fWY</u>
FJÌÎ	ÙŸŠXŒÙ	Úæ&ā~ā&ÅÓ^
FJÌF	ÙŸŠXŒÁÙ	Úæ&ā~ā&ÁV^ ^]@[}^
FJÏF	Ò ÁÔæ¦ } &āc [ ÁÔæ-^	Úæ&ā~ā&ÁV^ ^]@[}^
FJÎG	Ùā^c^Á⊤æ¦^∙	Úæ&ā~ā&ÁV^ ^]@[}^
FJIG	ÞÒY TŒÞÁÙæ {  ÁTæl^	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	V[ài}ÁR[@}ÁP	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	ÞÒYTŒÞÁŠi  iæ}Á& \	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	ÞÒY TŒÞÁPæ•}æ®Á•c^}	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	P [ &@ •cæi } ^ÁŠ [ ~i•ÁÓ^••i^	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Ø^!!^!ÅÒÅŒÅ& }'ÅÚ`  {æ}ÅÔ[	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Ö~¦[}ÅÒ¦}^•c	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Ö`¦[}ÅR[•^]@ä}^	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Ø^^¦^\ÁÒå`, ÅÖ[¦[c@^	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
FJHÏ	Õ^¦•@ÁÙæ¦æ@ÁT¦•Á-ã•@	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	ÞÒY TŒÞÁŠilliæ}	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	ÞÒY TŒÞÁÙæ {  ÁTæl^Á]å l	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Ü[••ÅÜ^*ã}æÅŠÅ& \	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Ùc^â}à^!*Å⊤[¦¦ā•ÁØ [¦æ	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Ùc^ā}à^¦*ÁÜ^*ā}æÁ∙ ∙¸}	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
FJGJ	Q:^}ÅRæ&[àÅÙæ¦æ@Å•@c{c ,\•	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Sæc:ÁŒ}}æÁT¦•Á妕{\¦	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Sæc:ÁTæ¢ÁŒ}}æÁ* æ:å^¦	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Ùci^}à^¦*Å⊤[¦¦ã•ÅØ [¦æÅci}}^\Å@	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[Ė

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•		
<u>MYUf</u>	<u>IgY</u> g	<u>GcifWY</u>
FJÌÎ	SUPYŒÁŒÞVÒÜÞŒVŒUÞŒŠÁÔUÜÚ	Úæ&ā~ā&ÁÓ^
	ÚŒÔŧØûÔÅÔUŒÙVÅÓUÞÙŒŀÅÒÝÔPŒÞÕÒ	Úæ&ā~ā&ÅÓ^
FJÌF	SUPYŒŴÞVÒÜÞŒVŧUÞŒŠĺÔUÜÚ	Úæ&i~i&ÁV^ ^]@[}^
	ÚŒÔŧØûÔÅÔUŒÙVÅÓUÞÙŒŀÅÒÝÔPŒÞÕÒ	Úæ&i~i&ÁV^ ^]@[}^
FJÏF	Òæ∙cÁŠÁŒÁÕæ¦å^}^!∙ÁŒ∙∙}ÁQ}&	Úæ&i~i&ÁV^ ^]@[}^
FJÎG	Üæ~~ÁÙ^āÁÔ@[ÁÞ[ÁQ^ÁQ}&	Úæ&i~i&ÁV^ ^]@[}^
FJGJ	Ù[,æÁSæc¦`ǎcÁØ`∙æÁ~ǎ•@Á{\¦	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
FJGI	Šæ}å^¦ÁÕ¦å}æÁT¦•Á*¦[	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È

GcifWY

#### &(&&``9`%GH

<u>MYUf</u>	<u>I gYg</u>
FJJ€	ŎŒÙVÁŠÁŒÁÕŒÜÖÒÞÒÜÙÁŒÙÙÞÁQÞÔ
FJÌÎ	ÒŒÙVÁŠÁŒÁÕŒÜÖÒÞÒÜÙÁŒÙÙÞÁQÞÔ
FJÌF	ŎŒÙVÁŠÁŒÁÕŒÜÖÒÞÒÜÙÁŒÙÙÞÁQÞÔ
FJHH	ŠÒYQÙÁŠ^[ÁR^}}å^Áä}•Áæ*c

#### &(&'``9`%GH

<u>MYUf</u>	<u>IgYg</u>
FJJ€	ŦÒÞWÖÒÜŒÁÙŒÞÁŒÞVUÞQU
FJÌÎ	ŦÒÞWÖÒÜŒÁÙŒÞÁŒÞVUÞQU
FJÌF	ŦÒÞWÖÒÜŒÁÙŒÞÁŒÞVUÞQU
FJÏF	ŠæÁŠi}c^¦}æÁX^¦å^
FJÎG	ŠæÁŠi}c^¦}æÁX^¦å^ÁÔæ~^
FJHÏ	Õ[ å•c^ã}ÁÙæ{ ÁT[  ã^Á& [Á& }!
FJHH	ÕUŠÖÙVÒQÞÁÙæ{ ÁT[  ^Á& [Á& }}•
	ÕUŠÖÙVÒQÞÁÙæ{ ÁT[  ^Á& [Á& }}•
FJGJ	Væ •\^ÁÓ^}bÁØæ}}ã^Á& \Á¦
	ÕUŠÖÙVÒQÞÁÙæ{ ÁT[  ^Á*¦[
	ÕUŠÖÙVÒlÞÁTæ{ǎ^Á• • å^
	ÕUŠÖÁTæ{ǎ^ÁTÁ• • å^
FJGI	1
	ÞÒŠÙUÞÁÓæ¦}^^Á& \Á¦

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<u>MYUf</u>	<u>IgYg</u>
FJÏF	Ô¦˘:ÁŠi iæÁP
FJÎG	Ü[{^¦[ÁÜ[{^
FJIG	ÞÒQTŒÞÁŠ[ ~ã•ÁTæ¦ā^Á , æ•@â} *Á { æ&@•
FJHÏ	Ó [[{ÅŒç^¦}Å• •{}ÅP^&\^¦ÅÔ[
	ÞÒQTŒÞÁŠ[ ˘ã•ÁTæ¦ā^Á ֻæ•@ã} *Á { ^&@
	ϷὸῦΤŒϷΑΤ[¦¦ã•Á& \
	ÞÒQTŒÞÁÙæ{  Á• •{ }ÁŠ[ ˘ã•ÁÞ^ã{ æ}
FJHH	ÞQÒTŒÞÁŠ[˘ã•ÁTæ¦^
FJGJ	Þ^ā { æ}ÁŠ [ ˘ã•Á⊤æ¦ ^
FJGI	ØÜQÒÖTŒÞÁP榦^ÁØÁå¦åç^¦Á@

#### &('%''9'%GH

<u>MYUf</u>	<u>IgYg</u>

#### GcifWY

Úæ&ā~ā&ÁÓ^||

Š[•ÁŒ}\*^|^•ÁÖã!^&c[!^ÁÔ[È Š[•ÁŒ}\*^|^•ÁÖä¦^&c[¦^ÁÔ[È Š[•ÁŒ}\*^|^•ÁÖã!^&c[¦^ÁÔ[È Š[•ÁŒ}\*^|^•ÁÖä!^&c[¦^ÁÔ[È Š[•ÁŒ}\*^|^•ÁÖã!^&c[!^ÁÔ[È Š[•ÁŒ}\*^|^•ÁÖã!^&c[!^ÁÔ[È Š[•ÁŒ}\*^|^•ÁÖä!^&c[¦^ÁÔ[È

Š[•ÁŒ}\*^|^•ÁÖã!^&c[!^ÁÔ[È Š[•ÁŒ}\*^|^•ÁÖä!^&c[¦^ÁÔ[È

#### <u>GcifWY</u>

Úæ&ā~ā&ÁV^|^]@[}^ Úæ&ā~ā&ÁV^|^]@[}^ Š[•ÁŒ}\*^|^•ÁÖä¦^&c[¦^ÁÔ[È Š[•ÁŒ}\*^|^•ÁÖä!^&c[¦^ÁÔ[È Š[•ÁŒ}\*^|^•ÁÖã!^&c[!^ÁÔ[È Š[•ÁŒ}\*^|^•ÁÖä!^&c[¦^ÁÔ[È Š[•ÁŒ}\*^|^•ÁÖä!^&c[¦^ÁÔ[È Š[•ÁŒ}\*^|^•ÁÖä¦^&c[¦^ÁÔ[È Š[•ÁŒ}\*^|^•ÁÖã!^&c[¦^ÁÔ[È Š[•ÁŒ}\*^|^•ÁÖã!^&c[!^ÁÔ[È

Úæ&ā~ā&ÁÓ^|| Úæ&ā~ā&ÁÓ^|| Úæ&ā~ā&ÁV^|^]@[}^ Š[•ÁŒ}\*^|^•ÁÖã!^&c[!^ÁÔ[È

#### Gc i fWY Úæ&ā~ā&ÁÓ^||

Úæ&ā~ā&ÁÓ^||

Úæ&å~å&ÁV^|^]@[}^ Úæ&å~å&ÁV^|^]@[}^ Úæ&ā~ā&ÁV^|^]@[}^

IJÎÏ€GHËÍ

<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
FJÌF	VŒÞUÁTUÜØWÙŒ	Úæ&ā~ā&ÁV^ ^]@[}^
FJÎG	Ùæ æ∶æ¦ÅÕ¦^*[¦å[	Úæ&ā~ā&ÁV^ ^]@[}^
FJIG	Õæ à^¦Å⊤[¦¦ã•ÁQåæÁ æà	Š[•ÁŒ}*^ ^•ÁÖã¦^&
	Tæ&åæ}ÁR[●Á æà	Š[•ÁŒ}*^ ^•ÁÖã¦^&
FJHÏ	Õæ¦à∧¦Å⊤æ¢ĺQåæ	Š[•ÁŒ}*^ ^•ÁÖã¦^&
	TQŠŠÒÜÁTæ¢	Š[•ÁŒ}*^ ^•ÁÖã¦^&
FJHH	Ø^å^¦ÅT[¦¦i•	Š[•ÁŒ}*^ ^•ÁÖã¦^&
	Ø^å^¦ÁP榦^ÁŠiàài^	Š[•ÁŒ}*^ ^•ÁÖã¦^&
FJGJ	Ø^å^¦ÅT[¦¦i•	Š[•ÁŒ}*^ ^•ÁÖã¦^&
	Ø^å^¦ÅP榦^ÁŠāààā^Å•æ&\Áåä¦	Š[•ÁŒ}*^ ^•ÁÖã¦^&
FJGI	Ø^å^¦Á₽榦^Åb`}\Á@	Š[•ÁŒ}*^ ^•ÁÖã¦^&

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<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
FJJ€	T UÖÒÙVUÁÔŒÙV0ŠŠU	Úæ&ã~ã&ÅÓ^
FJÌÎ	T UÖÒÙVUÁÔŒÙVQŠŠU	Úæ&ã~ã&ÁÓ^
FJÌF	T UÖÒÙVUÁÔŒÙVQŠŠU	Úæ&å~å&ÁV^ ^]@[}^
FJÏF	ئæ*æÅT^忦å[	Úæ&å~å&ÁV^ ^]@[}^
FJÎG	Ó¦[c{æ}ÅŒà¦æ@æ{	Úæ&ã~ã&ÁV^ ^]@[}^
FJIG	ÓÜUVTŒÞÁRæ&[àÁVÁ æà	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[Ĕ
	ÓÜUVTŒÞÁÙ[ Á-&c^ \ \	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[Ĕ
	ÓÜUVΤŒϷÅΤ[¦¦å∙ÅÜ[∙^	Š[•ÁŒ}*^ ^•ÁÖå¦^&c[¦^ÁÔ[Ė
	Ó¦[c{æ}ÅÖæ}	Š[•ÁŒ}*^ ^•ÁÖå¦^&c[¦^ÁÔ[Ė
FJHÏ	Ó¦[c{æ}ÅT[¦¦ª•ÅÜ[•^	Š[•ÁŒ}*^ ^•ÁÖå¦^&c[¦^ÁÔ[Ĕ
	Ó¦[c{æ}ÁŒà¦Á æà	Š[•ÁŒ}*^ ^•ÁÖå¦^&c[¦^ÁÔ[Ė
FJHH	V∙`&@iåæÅÔ	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[Ĕ
FJGJ	ÖÜÒYÁXã!*ã}ãæÁ¸ãåÁR[@}	Š[•ÁŒ}*^ ^•ÁÖå¦^&c[¦^ÁÔ[Ė
	Ö¦^¸ÅÔ@æ∙ÁÚÁàæ∖^¦	Š[•ÁŒ}*^ ^•ÁÖå¦^&c[¦^ÁÔ[Ĕ
	Ö¦^`, ÁŒ ^¢ÁÚÁ&@æ`~	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[Ĕ
	Ö¦^`, ÁŒ ^¢Áå¦åç^¦	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[Ĕ

#### &'\$,`%#&``9`%GH

<u>MYUf</u>	lgYg

#### &'\$,`'#(``9`%GH

#### <u>IgYg</u> <u>MYUf</u>

FJJ€ VÒÜŒÞÁRUÙÒÁŒ

&c[¦^ÁÔ[È &c[¦^ÁÔ[È &c**[¦^ÁÔ[**È &c**[¦^ÁÔ[**È &c[¦^ÁÔ[È &c[¦^ÁÔ[È &c[¦^ÁÔ[È &c**[¦^ÁÔ[**È &c**[¦^ÁÔ[**È

Úæ&ā~ā&ÁÓ^
Úæ&ā~ā&ÅÓ^
Úæ&ā~ā&ÁV^ ^]@[}^
Úæ&ā~ā&ÁV^ ^]@[}^
Úæ&ā~ā&ÁV^ ^]@[}^
Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[Ė
Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[Ė
Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[Ė
Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[Ė
Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[Ė
Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[Ė
Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È

#### <u>GcifWY</u>

Úæ&i~i&ÁÓ^||

#### <u>Gc i fWY</u>

Úæ&i~i&ÁÓ^||

&	•	%%`	'#(	"9'%GH
---	---	-----	-----	--------

<u>MYUf</u>	<u>I gYg</u>	<u>GcifWY</u>
FJJ€	UÔPUŒÁÙ	Úæ&ā~ā&ÁÓ^
&'%'`%#&``	9'%GH	
<u>MYUf</u>	<u>I gYg</u>	<u>GcifWY</u>
FJJ€	ÚÒÜÒZÁUŠÕŒ	Úæ&ā~ā&ÁÓ^
& <b>(\$-</b> `%#&``	9'%GH	
<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
FJJ€	VŒSŒŦWÜŒÁŦQÙWÒ	Úæ&ā~ā&ÁÓ^
& <b>(</b> %%`%#&``	9 <sup>.</sup> %GH	
<u>MYUf</u>	<u>l gYg</u>	<u>Gc i fWY</u>
FJJ€	SŒ Y ŒÓÒÁSÒÞRQ	Úæ&ã~ã&ÅÓ^
& <b>(</b> %*`%#&``	9 <sup>-</sup> %GH	
<u>MYUf</u>	<u>lgYg</u>	<u>Gc i fWY</u>
FJÌÎ	ÔÒÜXŒÞVÒÙĺŒÕWÙVℚÞ	Úæ&ā~ā&ÅÓ^
&(%-`%#&``	9 <sup>-</sup> %GH	
<u>MYUf</u>	<u>lgYg</u>	<u>Gc i fWY</u>
FJÌÎ	ØŠUÜÒÙÁÜŒTUÞ	Úæ&ā~ā&ÅÓ^
&(&%`'#(``	9 <sup>-</sup> %GH	
<u>MYUf</u>	<u>lgYg</u>	<u>Gc i fWY</u>
FJÌÎ	VUŠÒÖUÁVÒÜÒÙŒÁP0ÖŒŠÕU	Úæ&ā~ā&ÁÓ^
9 <sup>-</sup> %GH <sup>-</sup> &*	<u>*+</u>	
&'\$(``9`%(	GH`&*+	
<u>MYUf</u>	<u>lgYg</u>	<u>Gc i fWY</u>
FJÌF	TQÔSÒŸÁÙÁÔŒØÒ	Úæ&ā~ā&ÁV^ ^]@[}^
9`%gh`Gh		

#### &**`\$\$``9`%g**h`Gh

<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
G€FI	ŒÜVWÜUÁZŒVŒÜŒQÞ	ÒÖÜÁÖå*ácæ ÁŒ¦&@áç^
	ŒÜVWÜUÁZŒVŒÜŒQÞ	ÒÖÜÁÖã*ácæ ÁŒ¦&@áç^
G€F€	TŒÜSÒVIVŒÁTŒZŒVIŒÞ	ÒÖÜÁÖã*ácæ ÁŒ¦&@áç^
	ŒÜVWÜUÁZŒVŒÜŒQÞ	ÒÖÜÁÖå*ácæ ÁŒ¦&@áç^

<u>Gc i fWY</u>

Úæ&å~ã&ÅV^|^]@[}^

Úæ&ā~ā&ÁV^|^]@[}^

<u>MYUf</u>	lgYg	<u>Gc i fWY</u>
G€F€	TŒÜSÒVQVŒÁTŒZŒVŒÞ	ÒÖÜÁÖā*ācæ ÁŒ¦&@āç^
	ŒÜVWÜUÁZŒVŒÜŒŧÞ	ÒÖÜÁÖå*ācæJÁŒ¦&@āç^
<u>9'%GH'G</u>	н	

#### &'\$&``9`%GH`GH

<u>MYUf</u>	<u>lgYg</u>	<u>Gc i fWY</u>
G€€Î	ÙŒŠUÞ	₽æå}^•ÅÔ[{]æ}^ÊÅQ}&È
	ÔŒÜUŠÓÒŒWVŸ	₽æå}^•ÁÔ[{]æ}^ÊÁQ}&Ė
FJÎÏ	Rັ}^●ÁÓ^æ`c^ÁÙæ [}	Úæ&å~å&ÅV^ ^]@[}^
FJÍÌ	Rັ}^●ÁÓ^æ˘cˆÁÙæ [}	Úæ&å∻å&ÅV^ ^]@[}^

#### &'\$'``9`%GH`GH

<u>MYUf</u>	<u>lgYg</u>
FJÎÏ	Ÿ[~c@ÁV¦æð}ð}*ÁBÁÓ{] [^{^}cA\Ú¦[b^&cÁ &[}c&ÁÙ[~c@AÔ^}c!æ]A&[}c& W}ôc^&AÔ[{{``}ôc^ÁÒ~[!c=Á0}&

#### &'\$(``9`%GH`GH

<u>MYUf</u>	<u>I gYg</u>	<u>GcifWY</u>
G€€Î	ŚWÚÒÙŒÞVURQVUÙ	₽æã}^•ÁÁÔ[{]æ}^ÊÁQ}&È
	ŸÔUT≬ÞÖŒ	Pæi}^∙ÁÁÔ[{]æ}^ÉÁQ}&È
FJÎÏ	Tā&\^^•ÅÔæ~^	Úæ&å~å&ÅV^ ^]@[}^
FJÍÌ	Tã&\^^•ÁÔæ~^	Úæ&ā-ā&ÁV^ ^]@[}^

#### <u>9'%gh'Gh</u>

#### &**`\$**\*``9`%gh`Gh

<u>MYUf</u>	<u>lgYg</u>	<u>Gc i fWY</u>
G€F€	ŢŒŸŒłÓŒÜÓÒÜĺÙ₽IJÚĺBłÓWVŸĺÙŒŠIJÞ	ÒÖÜÁÖå*åcæ ÁŒ¦&@åç^
	TŒŸŒłÓŒÜÓÒÜĺÙPUÚĺBłÓWVŸĺÙŒŠUÞ	ÒÖÜÁÖã*ãcæ ÁŒ¦&@ãç^

#### <u>9'%GH'GH</u>

#### &'\$\*``9`%GH`GH

<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
G€€Î	TŒŸŒŀÓŒÜÓÒÜBÓVŸ	₽æå}^●ÅÅÔ[{]æ}^ÊÅQ}&È
FJÎÏ	Xã&c[¦•ÁÓæ¦à^¦ÁÙ@[]	Úæ&ã~ã&ÁV^ ^]@[}^
	T^åi}æÁP^¦{æ}ÅÔ	Úæ&å~å&ÅV^ ^]@[}^
FJÍÌ	Þ`}^:ÅÔæ¦{^}	Úæ&å~å&ÅV^ ^]@[}^
	T^åi}æÁP^¦{æ}ÅÔ	Úæ&å~å&ÅV^ ^]@[}^

#### &'\$+``9`%GH`GH

<u>MYUf</u>	<u>I gYg</u>	<u>GcifWY</u>
FJÍÌ	S¸æ}ÁBÁTá  ^¦Áæcc^•	Úæ&ā-ā&ÁV^ ^]@[}^
	ŠÁŒÁÜæåã[ÁBÁVXÁÙ^¦ç	Úæ&ネーネ&ÁV^ ^]@[}^

#### <u>9'%gh'Gh</u>

<u>MYUf</u>

#### &'\$,``9`%gh`Gh

<u>IgYg</u>

#### <u>Gc i fWY</u>

G€FI	XIÔSŸÙÁÜÒÙVŒWÜŒÞV	ÒÖÜÁÖã*ãcæ ÁŒ¦&@ãç^
	XlÔSŸÙÁÜÒÙVŒWÜŒÞV	ÒÖÜÁÖã*ãcæ ÁŒ¦&@ãç^
G€F€	XQÔSŸÙÁÜÒÙVŒWÜŒÞV	ÒÖÜÁÖã*ãcæ ÁŒ¦&@ãç^
	XQÔSŸÙÁÜÒÙVŒWÜŒÞV	ÒÖÜÁÖå*ácæ ÁŒ¦&@áç^

#### <u>9'%GH'GH</u>

#### &'\$,<sup>...</sup>9<sup>.</sup>%GH<sup>.</sup>GH

<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
G€€Î	XIÔSŸÙ	₽æã}^•ÁÁÔ[{]æ}^ÊÁQ}&È
	ÜÒÙVŒWÜŒÞV	₽æå}^•ÅÅÔ[{]æ}^ÊÅQ}&È
	ŠÐT ÁÕWVQÒÜÜÒZÁÜ [ åå [	Pæå}^•ÅÅÔ[{]æ}^ÊÅQ}&È
FJÎÏ	Š[]^:Á⊤æ¦ǎæÁ⊤¦∙	Úæ&ā~ā&ÁV^ ^]@[}^
	ŠæłÚ^•æåācæłÔæ-^	Úæ&ā-ā&ÁV^ ^]@[}^
FJÍÌ	Tæc•`{[c[ÅT∖c	Úæ&ā-ā&ÁV^ ^]@[}^

#### &'\$-``9`%GH`GH

<u>MYUf</u>	<u>I gYg</u>
FJÍÌ	Tæ¦å^ci&@ÅRæ∙
	U\æ{[c[ÁV•˘^[•@ä

#### &'%\$``9`%GH`GH

<u>MYUf</u>	<u>I gYg</u>
FJÎÏ	På^∙@å { æÅŒ∙æå&@åÁÙÁ⊤Ö
FJÍÌ	Ôæà¦æ ÁR^¦¦^ÁŠÁÖ¦

#### &'%%<sup>``</sup>9<sup>`</sup>%GH<sup>·</sup>GH

<u>MYUf</u>	<u>I gYg</u>
G€€Î	Œ{]æ¦[
	ØŠUÜÒÙÁP^{æ}å^:
FJÎÏ	Ü~ā:ÁR~æ}ÁÔ
	Ú æ&^}&i[ÁV[}i

#### <u>Gc i fWY</u>

Úæ&å~å&ÁV^|^]@[}^ Úæ&å~å&ÁV^|^]@[}^

#### <u>Gc i fWY</u>

Úæ&ā~ā&ÁV^|^]@[}^ Úæ&ā~ā&ÁV^|^]@[}^

#### <u>Gc i fWY</u>

Pæi}^•ÅÅÔ[{]æ}<sup>\*Å</sup>Å\\$& Pæi}^•ÅÅÔ[{]æ}<sup>\*Å</sup>Å\\$& Úæ&i&ÅV^|^]@[}^ Úæ&i&ÅV^|^]@[}^

<u>MYUf</u>	<u>I gYg</u>
FJÎÏ	Ú æ&^}&ã[ÅØ¦æ}\
	Öãç[Á⊤ă* `^
FJÍÌ	Vã∙&æ¦^} [ÁÜ[^
	Ú æ&^}&ã[Áئæ}\

#### &'%'``9`%GH'GH

<u>MYUf</u>	<u>I gYg</u>
G€€Î	ÙWÚÒÜÁÖUÞWVÙ
FJÎÏ	Ü~ā:ÁÞā&\ÁÚÁ¦ Á^•c
FJÍÌ	Ü ~ã∶ÁÞā&∖ÁÚÁI Á^∙c
	Tæ å[}æå[ÁTi}æ

#### &'%)``9`%GH`GH

<u>MYUf</u>	<u>I gYg</u>
G€€Î	ÜQZZUÙÁÙVÒÜÒUÙ
FJÎÏ	T [ }cæ } [ÁØæ&`}å [ÁÙÁ¦ Á^●c
	Tæ¦çã}ÁÓĭä å^¦∙
	Τ[¦æ}ÁÜ[●^ÁΤ¦●
	T[}cæ}[ÁØæ&`}å[ÁÙÁ¦ Á^∙c
FJÍÌ	T[}cæ}[ÁØæ&`}å[ÁÙÁ¦ Á^∙c
	T[}cæ}[ÁØæ&`}å[ÁÙÁ¦ Á^∙c
	Τ[¦æ}ÁÜ[•^ÁΤ¦•

#### &'%,<sup>...</sup>9<sup>.</sup>%GH<sup>.</sup>GH

<u>MYUf</u>	<u>I gYg</u>
FJÎÏ	Œ&æ]` &[ÁÓæ\^¦^
FJÍÌ	Ùæ åæ}æ∙ÁÓæ\^¦^

#### &'&\$``9`%GH`GH

<u>MYUf</u>	<u>IgYg</u>	<u>Gc i f</u>
FJÎÏ	ŠæÁQ}åicæÁÔæ~^	Úæ&ā~ā&
FJÍÌ	Šæĺā}åā æĺÔæ~^	Úæ&ā~ā&

#### <u>9'%qh'Gh</u>

#### &'&%``9`%gh`Gh

<u>MYUf</u>	<u>I gYg</u>
G€FI	PŒÞÙŒŀÞÁÚÜUÚÒÜVŀÌÒÙÁŠŠÔ
	VÒÞÞUÁÙWÙPIÁG
	PŒÞÙŒŀÞÁÚÜUÚÒÜVŀÌÒÙÁŠŠÔ

#### <u>GcifWY</u>

Úæ&ā~ā&ÁV^|^]@[}^ Úæ&ā~ā&ÁV^|^]@[}^ Úæ&å~å&ÁV^|^]@[}^ Úæ&ā~ā&ÁV^|^]@[}^

#### <u>GcifWY</u>

Pæi}^•ÅÔ[{]æ}^ÊÁQ}&È Úæ&ā~ā&ÁV^|^]@[}^ Úæ&å~å&ÁV^|^]@[}^ Úæ&å~å&ÁV^|^]@[}^

#### <u>GcifWY</u>

₽æã}^•ÅÔ[{]æ}^ÊÁQ}&È
Úæ&ä~ã&ÁV^ ^]@[}^
Úæ&ä~ã&ÁV^ ^]@[}^
Úæ&ā~ā&ÁV^ ^]@[}^
Úæ&ä~ã&ÁV^ ^]@[}^
Úæ&ä~ã&ÁV^ ^]@[}^
Úæ&ä~ã&ÁV^ ^]@[}^
Úæ&i~i&ÁV^ ^]@[}^

#### <u>Gc i fWY</u>

Úæ&ā~ā&ÁV^|^]@[}^ Úæ&ā~ā&ÁV^|^]@[}^

#### ٧Y

άV^|^]@[}^ kÁV^|^]@[}^

#### <u>GcifWY</u>

ÒÖÜÁÖi\*icæJÁŒ¦&@iç^ ÒÖÜÁÖä\*ácæ|ÁŒ¦&@áç^

<u>MYUf</u>	<u>IgYg</u>	<u>Gc i fWY</u>
G€FI	VÒÞÞUÁÙWÙPÁG	ÒÖÜÁÖã*ācæ ÁŒ¦&@āç^
G€F€	VÒÞÞUÁÙWÙPAÁG	ÒÖÜÁÖã*ácæ ÁŒ¦&@áç^
	VÒÞÞUÁÙWÙPAÁG	ÒÖÜÁÖã*ācæ ÁŒ¦&@āç^

#### <u>9'%GH'GH</u>

&'&%<sup>...</sup>9'%GH'GH

]æ}^ÊÁQ}&È
]æ}^ÊÁQ}&È
@[}^
@[}^

#### &'&'`'9'%GH'GH

<u>MYUf</u>	<u>IgYg</u>	<u>Gc i fWY</u>
FJÍÌ	Ŧ ŎÜÔŒŎU ĺ B ĺ Ù U Þ Ù ĺ Œ Ú Ú ŠIŒ Þ Ô Ò Ù	Úæ&å~å&ÅV^ ^]@[}^

#### <u>9'%gh'Gh</u>

#### &'&)``9`%gh`Gh

<u>MYUf</u>	<u>I gYg</u>	<u>GcifWY</u>
G€FI	TŴŨŒÞÔPŴU	ÒÖÜÁÖã*ācæ ÁŒ¦&@āç^
	TŴÜŒÞÔPŴVU	ÒÖÜÁÖã*ácæ ÁŒ¦&@ãç^
G€F€	TŴÜŒÞÔPŴVU	ÒÖÜÁÖã*ācæ ÁŒ¦&@āç^
	ΤΙΑ̈́ÜŒÞÔΡΩVU	ÒÖÜÁÖã*ácæ ÁŒ¦&@ãç^

#### <u>9'%GH'GH</u>

#### &'&)<sup>...</sup>9<sup>.</sup>%GH<sup>.</sup>GH

<u>MYUf</u>	IgYg	<u>Gc i fWY</u>
G€€Î	ΤϤΑ̈́ÜŒÞÔΡϲΑ̈́VU	₽æã}^∙ÁÁÔ[{]æ}^ÉÁQ}&È
FJÎÏ	Ò∣ÁV ˘] ǎ}æ { àæ	Úæ&ā-ā&ÁV^ ^]@[}^
FJÍÌ	ÒļÁV ~ ]ā}æ { àæ	Úæ&i~i&ÁV^ ^]@[}^

#### <u>9'%gh'Gh</u>

#### &'&-``9`%gh`Gh

<u>MYUf</u>	<u>IgYg</u>
G€FI	SŒÜŠŒÙÁÓŒÜ
	SŒÜŠŒÙÁÓŒÜ
G€F€	SŒÜŠŒÙÁÓŒÜ

### <u>Gc i fWY</u>

G€F€ SΆŠŒÙÁÓŒÜ

#### <u>9'%GH'GH</u>

#### &'&-``9`%GH'GH

<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
G€€Î	SŒÜŠŒÙÁÓŒÜ	₽æå}^•ÁÁÔ[{]æ}^ÊÁQ}&È
FJÎÏ	Üã[ÅÕ¦æ}å^ÅÔæ-^	Úæ&ā-ā&ÁV^ ^]@[}^

#### <u>9`%qh`Gh</u>

#### &''%``9`%gh`Gh

<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
G€FI	TŒÜÒVPÙÁÓÒŒWVŸÁÙŒŠUÞ	ÒÖÜÁÖå*åcæ ÁŒ¦&@åç^
	TŒÜÒVPÙÁÓÒŒWVŸÁÙŒŠUÞ	ÒÖÜÁÖi*icæ ÁŒ¦&@iç^

#### <u>9'%GH'GH</u>

#### &''%''9'%GH'GH

<u>I gYg</u>	<u>GcifWY</u>
ŬŒŠU Þ	₽æã}^∙ÁÔ[{]æ}^ÊÁQ}&È
SŒŸŠÒŸÁÓÒŒWVŸ	₽æã}^∙ÁÔ[{]æ}^ÊÁQ}&È
Øã¦•cÁBÁÙ[c[ÁÓæ¦à^¦ÁÙ@[]	Úæ&ā~ā&ÁV^ ^]@[}^
Øål•cÅBÅÙ[c[ÅÓælà^¦ÅÙ@[]	Úæ&ā-ā&ÁV^ ^]@[}^
	<b>gYg</b> ÙŒŠUÞ SŒŸŠÒŸÁÓÒŒWVŸ Øšt•cÅBÁÙ[c[ÁÓæłà^łÁÙ@[] Øšt•cÅBÁÙ[c[ÁÓæłà^łÁÙ@[]

#### &''&"9'%GH'GH

<u>MYUf</u>	<u>IgYg</u>	<u>Gcif</u>
FJÍÌ	R[^ÁBÁÙæ{•ÁÙ^¦çÁæčc[{[cảç^	Úæ&ā~ā
	Ùæ { ÅBÅR [ ^•ÅÙ^¦çÅæ`c[ { [ciç^	Úæ&ā~ā

#### <u>9`%qh`Gh</u>

#### &''''9'%gh'Gh

<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
G€FI	ÒŠÁÔUÜŒZUÞÁÖÒÁŒŦÒÜQÔŒÁÜÒÙV	ÒÖÜÁÖã*ācæ ÁŒ¦&@āç^
	ŠŒĺŠWÞŒĺÜÒÙVŒWÜŒÞVĺQÞÔ	ÒÖÜÁÖā*ācæļÁŒ¦&@āç^
	TUÜŒŠÒÙÁRUÙÒÁÙ	ÒÖÜÁÖā*ācæ ÁŒ¦&@āç^
	TUÜŒŠÒÙÁRUÙÒÁÙ	ÒÖÜÁÖå*ácæ ÁŒ¦&@áç^
	ŠŒĺŠWÞŒĺÜÒÙVŒWÜŒÞVĺQÞÔ	ÒÖÜÁÖā*ācæ ÁŒ¦&@āç^
	ÒŠÁÔUÜŒZUÞÁÖÒÁŒŦÒÜQÔŒÁÜÒÙV	ÒÖÜÁÖã*ãcæ ÁŒ¦&@ãç^
G€F€	ÒŠÁÔUÜŒZUÞÁÖÒÁŒŦÒÜQÔŒÁÜÒÙV	ÒÖÜÁÖå*ácæ ÁŒ¦&@áç^

<u>GcifWY</u> ÒÖÜÁÖi\*icæJÁŒ¦&@iç^

#### ΨY

ã&ÁV^|^]@[}^ ã&ÁV^|^]@[}^

#### \*ácæ|ÁŒ¦&@áç∧ \*ácæ|ÁŒ¦&@áç^

#### <u>MYUf</u> <u>I gYg</u> G€

#### <u>Gc i fWY</u>

ÒÖÜÁÖi\*icæJÁŒ¦&@iç^

ÒÖÜÁÖã\*ácæ|ÁŒ¦&@áç^ ÒÖÜÁÖã\*ácæ|ÁŒ¦&@áç^ ÒÖÜÁÖã\*ácæ|ÁŒ¦&@áç^ 

€F€	ŠŒÁŠWÞŒÁÜÒÙVŒWÜŒÞVÁQÞÔ
	T UÜŒŠÒÙÁRUÙÒÁÙ
	T UÜŒŠÒÙÁRUÙÒÁÙ
	ŠŒÁŠWÞŒÁÜÒÙVŒWÜŒÞVÁQÞÔ
	ÒŠÁÔUÜŒZUÞÁÖÒÁŒŦÒÜQÔŒÁÜÒÙV

#### <u>9'%GH'GH</u>

#### &''''9'%GH'GH

#### <u>GcifWY</u>

<u>MYUf</u>	<u>I gYg</u>	<u>GcifWY</u>
G€€Î	ÒŠÔUÜŒZUÞÁÖÒ	Pæi}^•ÁÂÔ[{]æ}^ÊÁQ}&È
	ŒŦÒÜÁÜÙVÜÞV	Pæã}^•ÁÂÔ[{]æ}^ÊÁQ}&È
FJÍÌ	ÙŠUŒÞÙÁÖÜŸÁÔŠÒŒÞÒÜÙÁBÁŠŒWÞÖÜŸ	Úæ&ā~ā&ÁV^ ^]@[}^

#### <u>9'%gh'Gh</u>

#### &'')``9`%gh`Gh

<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
G€FI	RŒÜWÕÁSŒÞRŒÞŒXIRIV	ÒÖÜÁÖã*ãcæ ÁŒ¦&@ãç^
	RŒÜWÕÁSŒÞRŒÞŒXIRIV	ÒÖÜÁÖã*ācæ ÁŒ¦&@āç^
G€F€	RŒÜWÕÁSŒÞRŒÞŒXIRIV	ÒÖÜÁÖã*ãcæ ÁŒ¦&@ãç^
	RŒÜWÕÁSŒÞRŒÞŒXIRIV	ÒÖÜÁÖå*ácæ ÁŒ¦&@áç^

#### <u>9'%GH'GH</u>

&'')<sup>...</sup>9<sup>.</sup>%GH<sup>.</sup>GH

<u>MYUf</u>	<u>IgYg</u>	<u>GcifWY</u>
G€€Î	TŒRUÜÁŠQÛWUÜ	Pæã}^∙ÁÁÔ[{]æ}^ÉÁQ}&È

#### <u>9`%gh`Gh</u>

#### &(\$\$``9`%gh`Gh

<u>MYUf</u>	<u>I gYg</u>	<u>GcifWY</u>
G€F€	RÒÙÙÔPÒÝĺÔUÜÚUÜŒV(UÞ	ÒÖÜÁÖã*ãcæ ÁŒ¦&@ãç^
	RÒÙÙÔPÒÝĺÔUÜÚUÜŒV(UÞ	ÒÖÜÁÖå*åcæ ÁŒ¦&@åç^

#### <u>9'%GH'GH</u>

#### &(\$\$``9`%GH`GH

<u>MYUf</u>	<u>IgYg</u>	<u>GcifWY</u>
FJÎÏ	) [¢[ÅÖ¦* *ÅÔ]	Úæ&ā~ā&ÅV^ ^]@[}^

<u>Gc i fWY</u>

Úæ&à-à&ÁV^|^]@[}^ Úæ&à-à&ÁV^|^]@[}^ Úæ&à-à&ÁV^|^]@[}^ Úæ&à-à&ÁV^|^]@[}^ Úæ&à-à&ÁV^|^]@[}^ Úæ&à-à&ÁV^|^]@[}^ Úæ&à-à&ÁV^|^]@[}^ Úæ&à-à&ÁV^|^]@[}^ Úæ&à-à&ÁV^|^]@[}^ Úæ&à-à&ÁV^|^]@[}^ Úæ&à-à&ÁV^|^]@[}^ Úæ&à-à&ÁV^|^]@[}^

<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
FJ΀	ØÒŒÒTŒÞÁYÁY ÁÔŒÚVÁWÙÞÁÁÁŠUÞŐÁ ÓÒŒÔP	Úæ&ā-ā&ÁV^ ^]@[}^
FJÍÌ	Ù[c[ÁÖ¦˘*ÁÔ[	Úæ&ā~ā&ÁV^ ^]@[}^
FJÍI	ØÒQÞÒTŒÞÁY ÁY ÁÔŒÚVÁWÙÞ	ÜÈÁŠĖÁÚ [   \ ÁBÁÔ [ È
FJÍ€	ØÒlÞÒTŒÞÅYÅYÁÔŒÚVÅWÙÞÅÜ	Úæ&å~å&ÁV^ ^]@[}^
& <b>(\$'``9</b> '%	GH'GH	
<u>MYUf</u>	<u>lgYg</u>	<u>Gc i fWY</u>
G€€Î	ŠŧÓÜÒÜŧŒB	₽æã}^∙ÁÁÔ[{]æ}^ÉÁQ}&Ë
	ÖIÙÔUVÒÔŒ	₽æi}^∙ÁÂÔ[{]æ}^ÊÁQ}&È
	ÙUÞUÜŒ	₽æi}^∙₩Ô[{]æ}^ÊAQ}&Ë
• •	,	

# ÙUÞUÜŒ Pæi}^•ÅÅÔ[{]æ}^Ê FJÎÏ U\_|ÅV@^ FJÎÌ U\_|ÅV@^ Úæ&i-i&ÅV^|^]@[}^

#### &(\$(``9`%GH`GH

#### <u>MYUf</u><u>IgYg</u>

FJÎÏ	Œà¦æ{•[}ÁTÁTÖÁÙ[c[ÁT^åi&æ ÁÕ¦[`]
	Œà¦æ{•[}ÁTÁÖ¦ÁÙ[c[ÁT^åä&æ ÁÕ¦[`]
	Ù[c[ÁT^åi&æ ÁÕ¦[č]
	Ù[c[ÁT^åi&æ ÁÕ¦[č]
FJÎI	ŬUVUÁT Ò Ö (Ô Œ ŠÁÕ Ü U W Ú
	ŬUVUÁT Ò Ö (Ô Œ ŠÁÕ Ü U W Ú
FJ΀	ŬUVUÁT Ò Ö (Ô Œ ŠÁÕ Ü U W Ú
	ŬUVUÁT Ò Ö (Ô Œ ŠÁÕ Ü U W Ú
FJÍÌ	Ù[c[ÁT^åi&æ ÁÕ¦[č]
	Œà¦æ{•[}ÅTÁÖUÁÙ[c[ÁT^åi&æ ÁÕ¦[č]
	Œà¦æ{•[}ÁTÁÖ¦ÁÙ[c[ÁT^åi&æ ÁÕ¦[`]
	₽[}ã* {æ}ÅRæ∙ÅTÅÖ¦
	Ù[c[ÁT^åi&æ ÁÕ¦[č]
FJÍÏ	ŬUVUÁ T Ò Ö QÔ Œ ŠÁÕ Ü U W Ú
	ŬUVUÁ T Ò Ö QÔ Œ ŠÁÕ Ü U W Ú

#### <u>9'%gh'Gh</u>

#### &(\$)<sup>...</sup>9<sup>.</sup>%gh<sup>.</sup>Gh

# MYUf JgYg Gc i fWY G€F1 ÒŠÁVUÔŠUVÒ ÒÖÜÅÖi\*iælÅŒ!&@iç^ òŠÁVUÔŠUVÒ ÒÖÜÅÖi\*iælÅŒ!&@iç^ G€F€ ÒŠÁVUÔŠUVÒ ÒÖÜÅÖi\*iælÅŒ!&@iç^ òŠÁVUÔŠUVÒ ÒÖÜÅÖi\*iælÅŒ!&@iç^ òŠÁVUÔŠUVÒ ÒÖÜÅÖi\*iælÅŒ!&@iç^

#### <u>9'%GH'GH</u>

#### &(\$)<sup>..</sup>9<sup>.</sup>%GH<sup>.</sup>GH

#### <u>MYUf</u> <u>IgYg</u> FJÎÏ ÒŒÙVŠŒÞÖÁÒTÚŠUŸTÒÞVÁŒÕÔŸ FJÍÌ Ù@i}å[ÁÙcǐåi[Á]@[c\*¦]@¦ FJÍI ÙVQŠŠÁŠÒÙŠQÒÁÒÁTÜÙ FJÍ€ ÙVQŠŠÁŠÒÙŠQÒÁÒÁTÜÙ

#### &(\$+``9`%GH`GH

<u>MYUf</u>	<u>I gYg</u>
G€€Î	R(TÒÞÒZÍTæliæ
FJÎÏ	V∙`à[ä́A`ã&@ã¦[

#### &(\$,"9'%GH'GH

<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
FJÍI	ŬVQŠÙU ÞÁÕÒUÁÖÁÖÜÜ	ÜÈÁŠĖÁÚ [   \ ÁBÁÔ [ È
FJÍ€	ÙVQŠÙUÞÁÕÒUÁÖÁÖÜÁÜ	Úæ&ā~ā&ÁV^ ^]@[}^

#### &(\$-``9`%GH`GH

<u>MYUf</u>	<u>  I g Y g</u>
G€€Î	PŒÜUÁÓ^æciå :
FJÎÏ	Þæ\æ*æ,æłÔ
	Væ\æ{`¦æÁTå•`^
FJÍÌ	U\æÁÖ[}ÁÔ
	Væ\æ{`¦æÁTå•`^

#### &(%\$``9`%GH`GH

<u>MYUf</u>	<u>I gYg</u>
FJÍÌ	ŒÁUÞÒÓ˘•ã}^••ÁÓ[[\\^^]ã}*
	Væ{æ^[ÅŠÁRÁŒÁFÁÓ˘∙ã}^∙∙ÅÓ[[\\^^]ã}*

#### &(%%<sup>...</sup>9<sup>.</sup>%GH<sup>.</sup>GH

<u>MYUf</u>	<u>    gYg</u>	<u>Gc i fWY</u>
FJÎÏ	Sæ¸æà^ÁS^}bá	Úæ&ā~ā&Á∨^ ^]@[}
	Uåæ}æ\æÁSÁT¦∙	Úæ&ā~ā&ÁV^ ^]@[}
FJÍÌ	Sæ¸æà^ÁS^}tá	Úæ&ã~ã&ÅV^ ^]@[}
	V@[{æ•[}ÅYæ\æ\[ÅT¦•	Úæ&ã~ã&ÅV^ ^]@[}

#### <u>Gc i fWY</u>

```
Úæ&ā~ā&ÁV^|^]@[}^
Úæ&å~å&ÁV^|^]@[}^
ÜĖÁŠĖÁÚ [ | \ ÁBÁÔ [ È
Úæ&ā~ā&ÁV^|^]@[}^
```

#### <u>GcifWY</u>

Pæi}^•ÅÔ[{]æ}^ÊÁQ}&È Úæ&ā~ā&ÁV^|^]@[}^

#### <u>GcifWY</u>

Pæi}^•ÁÁÔ[{]æ}^ÉÁQ}&È
Úæ&ā-ā&ÁV^ ^]@[}^
Úæ&ā-ā&ÁV^ ^]@[}^
Úæ&ā-ā&ÁV^ ^]@[}^
Úæ&i~i&ÁV^ ^]@[}^

#### <u>GcifWY</u>

Úæ&ā~ā&ÁV^|^]@[}^ Úæ&å~å&ÁV^|^]@[}^

Λ, Λ, Λ, Λ,

#### &(%&``9`%GH`GH

<u>MYUf</u>	<u>lgYg</u>	<u>Gc i fWY</u>
FJÎI	ÔÜŒ(ŠÁØÁ Y ÁÁÁŠUÞŐÁÓÒŒÔP	Úæ&ã~ã&ÅV^ ^]@[}^
FJÍÌ	Õ^[¦*^ÅÞ^å	Úæ&å~å&ÅV^ ^]@[}^
FJÍI	ÔÜŒQŠÁØÁYÁÜ	ÜÈÁŠÈÁÚ [   \ ÁBÁÔ [ È
FJÍ€	ÔÜŒIŠÁØÁYÁÜ	Úæ&ā~ā&ÁV^ ^]@[}^

#### &(%'``9`%GH`GH

<u>MYUf</u>	<u>IgYg</u>	<u>Gc i fWY</u>
FJ΀	ÔUXÒÜÖŒŠÒÁSÒŧVPÁTÜÙÁÁÁŠUÞŐÁ ÓÒŒÔP	Úæ&ä~å&ÅV^ ^]@[}^
FJÍI	ÓŒÜÞÒÙÁÔÜÒŧÕPVUÞÁÖ	ÜÈÁŠĖÁÚ [   \ ÁBÁÔ [ È
FJÍ€	ŬVWŒÜVÁTQÞÖŒÁØÁTÜÙÁÜ	Úæ&ā~ā&ÁV^ ^]@[}^

#### &(%)<sup>..</sup>9<sup>.</sup>%GH<sup>.</sup>GH

<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
G€€Î	ŸUÙP@SŒZWÁS0}b[	₽æã}^∙ÁÂÔ[{]æ}^ÊÁQ}&È
FJÎÏ	S˘å[ֻÁÙ@à:˘\[ÁT¦∙	Úæ&ā~ā&ÁV^ ^]@[}^
	Sã { ˘ ¦æÁÙ˘ { ăÁ T ¦•	Úæ&ā~ā&ÁV^ ^]@[}^
	Pæ{æ{[c[ÁÙ@à{æ}[ÁT¦∙	Úæ&ā~ā&ÁV^ ^]@[}^
FJÍÌ	Tæc*`}æ{åÅŸ`\ǻT¦∙	Úæ&ā~ā&ÁV^ ^]@[}^
	Òài}æÁ⊤[cæ[\i	Úæ&ā~ā&ÁV^ ^]@[}^
FJÍI	ÙVWŒÜVÁÔÁÒÖ Y	ÜÈÁŠĖÁÚ [   \ ÁBÁÔ [ È

#### &(%\*``9`%GH`GH

<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
G€€Î	ŒŠŧÔŧŒÙ	₽æã}^∙ÁÁÔ[{]æ}^ÊÁQ}&È
	ÓUWVQÛWÒB	₽æå}^∙ÁÅÔ[{]æ}^ÊÁQ}&È
	ÔÜÒŒVQUÞÙ	Pæi}^∙ÁÁÔ[{]æ}^ÉÁQ}&È
	ŦIJÜŒŠÒÙÁŦæ¦&^ æ	₽æå}^∙ÁÅÔ[{]æ}^ÊÁQ}&È
FJÎÏ	ØWSWŸŒÁVÒŒÁÔUUSŧÒÁŦØÜÙ	Úæ&ā~ā&ÁV^ ^]@[}^
FJÍÌ	Þ^`^ÅŸ[¦\ÅÜ^^ÅÓæ\^!^ÅÜæ•\å}•ÅÞÅŸÅÜ^^Å Óæ\^!^	Úæ&i~i&ÁV^ ^]@[}^
	Üæ•\å}ÅÓæ\^!^ÅÞ^`ÅŸ[!\ÁÜ^^	Úæ&ā~ā&ÁV^ ^]@[}^
	Üæ∙\≬}∙ÁÞÁŸÁÜ^^ÁÓæ¦\^¦^	Úæ&ā~ā&ÁV^ ^]@[}^

#### &(%+<sup>``</sup>9<sup>`</sup>%GH<sup>·</sup>GH

<u>MYUf</u>	<u>I gYg</u>	<u>GcifWY</u>
G€€Î	PlÒÙPlTŒŸ[•@i\[	₽æå}^•ÁÁÔ[{]æ}^ÊÁQ}&È
FJÎÏ	Ö[àæ∙@å∕V	Úæ&ā~ā&ÁV^ ^]@[}^
	Pā^∙@ā { æÁŸ [  &@āÁÕ	Úæ&ā~ā&ÁV^ ^]@[}^

#### <u>MYUf</u> <u>IgYg</u>

FJÍÌ Pả^•@à { æÅŸ [ả&@åÅÕ Ö [àæ•@åÅV

#### &(%,<sup>...</sup>9<sup>.</sup>%GH<sup>.</sup>GH

<u>MYUf</u>	<u> gYg</u>
FJÍÌ	Üæ∙\ã}ÁÒ{ã ^
	Üæ∙\ã}ÁŒ}}æÁ⊤¦

#### &(%-``9`%GH`GH

<u>MYUf</u>	<u>I gYg</u>
G€€Î	ŒXUÞÁVÜŒŀŀŀÞÕ
	ŒXUÞÁÚÜUÖWÔVÙ
	ÔÒÞVÒÜ
FJÎÏ	Ò ÁÕæ¦¦ã&ãc[ÁÔæ~^
FJÍÌ	Œ¦{^}忦^:ÅÔi}å^

Œ&æ]`|&[ÁÔæ~^

#### &(&\$``9`%GH`GH

<u>MYUf</u>	<u>IgYg</u>
G€€Î	ŒÜVÙÒÜXŧÔÒB
	ÔŒÜÚÒVÁÔŠÒŒÞĮÞÕ
FJÎÏ	Òæ∙cÁŠÁŒÁÕæ¦å^}^¦●ÁŒ••}ÁQ}&
FJÍÌ	Üæ~`ÁÙ^¾Ô@[ÁÞ^ÁQ^ÁQ}&

#### &(&%``9`%GH`GH

<u>MYUf</u>	<u>I gYg</u>
G€€Î	ŒÚŒÜVTÒÞVÙ
	ÔŒŠÓŒÁ⊤æ¦iæ
	ÔŒÜÜŒÞZŒÁŠŤàĩæ
	X0XŒÜŒÁÔæ¦[ å}æ
	ÜŒ T QÜÒZÁÚæ¦ã&ãæ
	R≬TÒÞÒZÁܢà^}
	ÒÙÛW0XÒŠÁŒ} [}ä[

#### &(&'``9`%GH`GH

#### <u>MYUf</u> <u>IgYg</u> G€€Î Š₩ÚῦVŒÙÞ F.JĴĨ ФİŠi\c∧!\¤İX∧!å∧

FJII	Sæasa}cri}æaxria
FJÍÌ	Õ[{^:ÅRæ&\

<u>Gc i fWY</u> Úæ&i∻i&ÁV^|^]@[}^

Úæ&ā-ā&ÁV^|^]@[}^

#### <u>Gc i fWY</u>

Úæ&ā~ā&ÁV^|^]@[}^ Úæ&ā~ā&ÁV^|^]@[}^

#### <u>Gc i fWY</u>

Pæi}^•ÅÅÔ[ { ]æ}^ÉÅQ}&Ė
Pæi}^•ÅÅÔ[ { ]æ}^ÉÅQ}&Ė
Pæi}^•ÅÅÔ[ { ]æ}^ÉÅQ}&È
Úæ&ä-å&ÅV^|^]@[ }^
Úæ&ä-å&ÅV^|^]@[ }^
Úæ&ä-å&ÅV^|^]@[ }^

#### <u>Gc i fWY</u>

Pæi}^•ÅÅÔ[ { ]æ}^ÉÅQ}&Ė
Pæi}^•ÅÅÔ[ { ]æ}^ÉÅQ}&È
Úæ&ä-ä&Å\/^|^]@[ }^
Úæ&ä-ä&Å\/^|^]@[ }^

#### <u>Gc i fWY</u>

Pæi}^∙₩Ô[{	]æ}^ÊÁQ}&È
Pæã}^∙₩Ô[{	]æ}^ÊÁQ}&È
Pæi}^∙₩Ô[{	]æ}^ÊÁQ}&È
Pæi}^∙₩Ô[{	]æ}^ÊÁQ}&È
Pæi}^∙₩Ô[{	]æ}^ÊÁQ}&È
Pæã}^∙₩Ô[{	]æ}^ÊÁQ}&È
Pæi}^∙₩Ô[{	]æ}^ÊÁQ}&È

#### <u>Gc i fWY</u>

₽æå}^•ÅÅÔ[{]æ}^ÈÅQ}&Ė Úæ&&-&&ÅV^|^]@[}^ Úæ&&-&&ÅV^|^]@[}^

#### &(&)``9`%GH`GH

<u>MYUf</u>	<u>I gYg</u>
FJÍI	ÕŒÜÖQÞÒÜÁŠÁÖÁÜ
	ÕŒÜÖQÞÒÜÁY RÁTÜÙÜ
FJÍ€	ÕŒÜÖQÞÒÜÁŠÁÖÜ
	ÕŒÜÖŠÞÒÜÁYÁRÁTÜÙÜ

#### &(&\*``9`%GH`GH

<u>MYUf</u>	<u>IgYg</u>
FJÍI	VŒŸŠUÜÁTŒÜŸÁŦÜÙÁÜ
FJÍ€	VŒŸŠUÜÁTŒÜŸÁŦÜÙÁÜ

#### &(&+``9`%GH`GH

<u>MYUf</u>	<u>IgYg</u>
G€€Î	ÔUÒŠŠUÁRæ&\ ^}
FJÎÏ	Ô¦ĭ:ÁŠã ãæÁP
FJÍÌ	Ù[:æÁÔæ¦ [●Á⊤

#### &('%``9`%GH`GH

<u>MYUf</u>	<u>I gYg</u>
G€€Î	ÚPØÒÁŠŒÁÓÜQÖÕÒÙ
FJÎÏ	Ùæ æ:æ¦ÅÕ¦^*[¦ã[
FJÍÌ	Ùæ æ∶æ¦ÅÕ¦^*[¦ã[

#### &(')<sup>...</sup>9<sup>.</sup>%GH<sup>.</sup>GH

<u>MYUf</u>	<u>IgYg</u>
FJÍI	ÓWÔPPUŠZÁPÁÜ
FJÍ€	ÓWÔPPUŠZÁPÁÜ

#### &)\$%``9`%GH`GH

<u>MYUf</u>	<u>IgYg</u>
FJÍI	ÙÚQVŠÒÜÁÚŒWŠ
FJÍ€	TWÜÜŒŸÁPÒŠŸÞŒ

#### &)\$)<sup>...</sup>9<sup>.</sup>%GH<sup>.</sup>GH

<u>MYUf</u>	<u>I gYg</u>
FJÍI	ÖÒÙTUÞÖÁYŒŠVÒÜÁRÜÁŒVVŸ
FJÍ€	ÖÒÙ T U ÞÖÁ Y ŒŠVÒÜÁRÜÜ

#### &)\$,<sup>...</sup>9<sup>.</sup>%GH<sup>.</sup>GH

<u>MYUf</u>	<u>lgYg</u>
FJÌ€	ΧὸνὸϋœϷἰὺἱυøἱøυϋὸιῶϷἱΥœϋὺ

#### <u>Gc i fWY</u>

ÜĖÅŠĖÅÚ [|\ÅBÅÔ[Ė ÜĖÅŠĖÅÚ [|\ÅBÅÔ[Ė Úæ&å-å&ÅV^|^]@[}^ Úæ&å-å&ÅV^|^]@[}^

#### <u>Gc i fWY</u>

ÜÈÁŠÈÁÚ [ | \ ÁBÁÔ [ È Úæ&ã~ã&ÁV^|^ ] @ [ }^

#### <u>Gc i fWY</u>

Pæi}^•ÅÅÔ[ { ]æ}^ĖÅQ}&È Úæ&ä-å&ÅV^|^]@[ }^ Úæ&ä-ä&ÅV^|^]@[ }^

#### <u>Gc i fWY</u>

₽æi}^•ÅÂÔ[{]æ}^ÊÅQ}&È Úæ&à-à&ÅV^|^]@[}^ Úæ&à-à&ÅV^|^]@[}^

#### <u>Gc i fWY</u>

ÜÈÁŠÈÁÚ [ | \ ÁBÁÔ [ È Úæ&ã~ã&ÁV^|^ ] @ [ } ^

#### <u>GcifWY</u>

ÜÈÁŠĖÁÚ [ | \ ÁBÁÔ [ È Úæ&ã~ã&ÁV^|^ ] @ [ } ^

#### <u>Gc i fWY</u>

ÜÈÅŠÈÅÚ [ | \ ÅBÅÔ [ È Úæ&ã~ã&ÁV^|^ ] @ [ }^

#### <u>Gc i fWY</u> Úæ&å-å&ÅV^|^]@[}^
#### &)%%<sup>``</sup>9<sup>·</sup>%GH<sup>·</sup>GH

<u>MYUf</u>	<u>IgYg</u>	<u>Gc i fWY</u>
FJÍI	ŠÇÞU Y ŠÒÙÁÓÒŒVÜ(ÔÒÁ T ÜÙ	ÜÈÁŠĖÁÚ [   \ÁBÁÔ [ È
	ÓÒŠŠÁÔŠŒÜÒÞÔÒÁŦÜÙ	ÜÈÁŠĖÁÚ [   \ÁBÁÔ [ È
FJÍ€	ÓÒŠŠÁÔŠŒÜÒÞÔÒÁTÜÙ	Úæ&ã~ã&ÁV^ ^]@[}^

#### &)%)<sup>...</sup>9<sup>.</sup>%GH<sup>.</sup>GH

<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
FJ΀	ØÜIÙÓÒÒÁVPÒUÖUÙIŒÁSÁÁÁŠUÞÕÁÓÒŒÔP	Úæ&ā~ā&ÁV^ ^]@[}^
FJÍI	ÙT@VPÁŠWŠWÁTŒÙUÞ	ÜÈÁŠĖÁÚ [   \ÁBÁÔ [ È
FJÍ€	TŒÜÙPŒŠŠĺŒÞÞÜ	Úæ&ā~ā&ÁV^ ^]@[}^

#### &)&(``9`%GH`GH

<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
FJÍI	V Y ÒÒÖÁÜUÓVÁ T ÁÜ	ÜÈÁŠĖÁÚ [   \ ÁBÁÔ [ È
FJÍ€	VY ÒÒÖÁÜUÓVÁTÁÜ	Úæ&ä~ã&ÁV^ ^]@[}^

#### &)&)<sup>...</sup>9<sup>.</sup>%GH<sup>.</sup>GH

<u>MYUf</u>	IgYg	<u>Gc i fWY</u>
FJÍI	ÕŒŒÞÙÓUÜUÁPÁÜÁŠVÁË ĔÁŠVUÜ®ÁÓÔPÁŠQJĒ Í Ï HJ	ÜĖÁŠĖÁÚ [   \ ÁBÁÔ [ È
FJÍ€	ÕŒŧÞÙÓUÜUÁPÁÜ	Úæ&ā~ā&ÁV^ ^]@[}^

#### B GCHC

#### %\$\$``B`GCHC

<u>MYUf</u>	<u>IgYg</u>	<u>GcifWY</u>
FJÌÎ	ŠÁŒÁŠÒÕŒŠÁÔÒÞVÒÜ	Úæ&ā-ā&ÅÓ^
FJHÏ	Ói}å^¦ÁÓ¦[•ÁTæ¢Áæ}åÁQ¦çi}*Á*æ•Á•cæ	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
FJHH	Ói}å^lÁÓl[•ÅTæ¢Åæ}åÅQlçi}*Å*æ•Å•cæ	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È

#### %\$)<sup>...</sup>B<sup>.</sup>GCHC

<u>MYUf</u>	<u>IgY</u> g	<u>Gc i fWY</u>
FJJ€	ΤυϋὸϷυἰôαϋŒ	Úæ&ā~ā&ÅÓ^
FJÌÎ	ΤUÜÒÞUÁÔQÜŒ	Úæ&ā~ā&ÅÓ^
FJÌF	ΤUÜÒÞUÁÔQÜŒ	Úæ&ā~ā&ÁV^ ^]@[}^
FJIG	ŠÒYQÙÁP^¦àcÁPÁÔ@æ¦[[cc^Á& \	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	ŠÒYQÙÁÙæ}妿Á&[{]cÁ[]¦	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
FJHÏ	Ùā*^ ÁÓæ¦¦^ccÁ•^¦çÁ•cæÁæcåcÁŒÁŒå ^¦	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
FJHH	Ùā*^ ÁÓæ¦¦^cÁÜ[●^Á*æ●Á●cæ	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	ÙÒℓÕÒŠÁÓæ¦¦^ccÁÜ [ ●^ÁÕæ●Á●cæ	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È

<u>MYUf</u>	IgYg	<u>GcifWY</u>
FJGJ	RÒÞSQÞÙÁÞæ¦¦^ÁŒ*}^•Áä¦[}¸\¦	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	R^}\à}•ÁŒ*}^•Á]@[}^Á[]¦	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
FJGI	Þč c[}Áئ^å\Á¦^æ Á^●cÁ@	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	TQŠŠÒÜÁÙæ {  Á¦^æ Á^∙cÁ@	Š[•ÁŒ}*^ ^•ÁÖå¦^&c[¦^ÁÔ[È
%\$,``B`GC	нс	
<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
FJJ€	RÁBÁXÁÙUWÞÖÙ	Úæ&ā-ā&ÅÓ^
FJÌÎ	ÚÜUØÒÙÙUUÞŒŠÁŒVVUÜÞÒŸÁÙÒÜXIÔÒ	Úæ&ā~ā&ÅÓ^
	ÔÒÞVÜUÁŠÒÕŒŠĒŠUÙÁŒÞÕÒŠÒÙ	Úæ&ā-ā&ÅÓ^
	ŠÁŒÁŠÒÕŒŠÁÔÒÞVÒÜ	Úæ&ā~ā&ÅÓ^
	ŠUÙÁŒÞÕÒŠÒÙÁŠÒÕŒŠÁÔÒÞVÒÜ	Úæ&ā~ā&ÅÓ^
	ÔÒÞVÜUÁŠÒÕŒŠÁŠUÙÁŒÞÕÒŠÒÙ	Úæ&ā~ā&ÅÓ^
	ÔÒÞVÜUÁŠÒÕŒŠ	Úæ&ā~ā&ÅÓ^
FJÌF	ÒŒÙVÁŠUÙÁŒÞÕÒŠÒÙÁŠÒÕŒŠÁÔÒÞVÒÜ	Úæ&à~ã&ÅV^ ^]@[}^
	ÔÒÞVÜUİŠÒÕŒŠİÖÒŠİÒÙVÒİÖÒİŠUÙİ ŒÞÕÒŠÒÙ	Úæ&ā-ā&ÅV^ ^]@[}^
FJÏF	Šæci}ÁŒ{^\i&æ}ÁQ}•ÁŒ*^}&^	Úæ&à~å&ÅV^ ^]@[}^
FJÎÏ	Ræ}^•ÁÓ^æ`c^ÁÙ[ [}	Úæ&ā~ā&ÁV^ ^]@[}^
FJÎG	Ræ}^∙∮Ó^æ`c^ÁÙæ [}	Úæ&ā~ā&ÁV^ ^]@[}^
FJGI	Zi* { &}ÁØ^!}&}åÁ• • { }ÁŒ àcÁZi* { &}Á!	Š[•ÁŒ}*^ ^•ÁÖå¦^&c[¦^ÁÔ[È
%\$-``B`GCHC		
MYUf	ΙαΥα	GcifWY

FJJ€	ÚÒÜÒZÁTŒÝŒT®ÞŒ	Úæ&ā~ā&ÅÓ^
FJÌÎ	ÚÒÜÒZÁTŒÝŒT®ÞŒ	Úæ&ā~ā&ÅÓ^
FJÌF	ÚÒÜÒZÁTŒÝŒTŨÞŒ	Úæ&ā~ā&ÁV^ ^]@[}^
FJÎÏ	Õ¦[••à^¦*ÁÙåå}^^	Úæ&ā~ā&ÁV^ ^]@[}^
	Õ[}:æ ^∙ÅŠ`å∙æ	Úæ&&&&ÅV^ ^]@[}^
FJÎG	Õ¦[••à^¦*ÁÙåå}^^	Úæ&ā~ā&ÁV^ ^]@[}^
FJIG	Õ¦[••à^¦*ÁÙåå}^^ÁØæ^Á• •{}	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Ræ}}ä}&\ÅP^¦^ÁÕÁÒ ^æ}[¦ÁÔÁ { æ&@	Š[●ÁŒ}*^ ^●ÁÖã¦^&c[¦^ÁÔ[Ė
FJHÏ	Ói}å^¦ÅP^}¦^	Š[●ÁŒ}*^ ^●ÁÖã¦^&c[¦^ÁÔ[Ė
	Óā}å^¦ÁT[  ā^ÁT¦•	Š[●ÁŒ}*^ ^●ÁÖã¦^&c[¦^ÁÔ[Ė
FJHH	ÓQϷÖÒÜÅΤ [   ͽヘÅΤ ¦ •	Š[●ÁŒ}*^ ^●ÁÖã¦^&c[¦^ÁÔ[Ė
	ÓQÞÖÒÜÁÙæ  ^Á•c^}	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	ÓℚÞÖÒÜÁÙæ {  Á& [   }	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	W}&\^ ÁÒå_ÁTÁÙæ  ^Á& \ÁÓæ}\Á[~ÁŒ{	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	ÓQÞÖÒÜÁ₽^}¦^Á•c^ {	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È

#### IJÎÏ€GHËÍ

:=B8=B	;	G

<u>MYUf</u>	<u>I gYg</u>
FJGJ	ÓQÞÖÒÜÁQ•¦æ^ Á⊤[  ā^
FJGI	ÓQÞÖÒÜÁQ¦çã} *Á& \Á¦
	ÓQÞÖÒÜÁQ•¦æ^ Á¦

#### %%\$``B`GCHC

<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
FJJ€	RÁBÁÙÁŒWVUÁÓUÖŸ	Úæ&ā~ā&ÅÓ^
FJÌÎ	RÁBÁÙÁŒWVUÁÓUÖŸ	Úæ&ā~ā&ÁÓ^
FJÌF	RÒÙÙÒÁŒWVUÁÓUÖŸ	Úæ&ā~ā&ÁV^ ^]@[}^
FJÏF	Òæ•c^¦}ÅT[c[¦•	Úæ&ā~ā&ÁV^ ^]@[}^
FJÎÏ	ÚPUÒÞIÝÁՌ܌ÕÒ	Úæ&ā~ā&ÁV^ ^]@[}^
FJÎG	Öæç^∙Á⊤ [c[¦ÁÜ^à ĭå åå} *	Úæ&ā~ā&ÁV^ ^]@[}^
FJHÏ	Ùā*æ Á⊤[¦¦ā•Áæ`c[Á¦^]¦	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
FJHH	Òå^ ∙c^ã}ÁÙæ{ Á⊤ã}^¦çæÁæčc[Á¦^]¦	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
FJGJ	Ù`] `}`\ÁBÁŸ[`æłcłÞå&@ÁÙ`]¦`}`\ÁÔÁÜÁ Ÿ[`æłcłæ`c[Á!^]¦•	Š[•ÁŒ}*^ ^•ÁÖã!^&c[¦^ÁÔ[Ė

#### %%)<sup>...</sup>B<sup>.</sup>GCHC

#### <u>Gc i fWY</u>

<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
FJJ€	ÚÒÜÒZÁ܌،ҊÁP	Úæ&ā-ā&ÁÓ^
FJÌÎ	T U ŠŨÞŒÁÔÒÔŨŠŨŒÁ T	Úæ&ā-ā&ÁÓ^
	XŒÙÛWÒZÁTŒÞWÒŠŒ	Úæ&ā-ā&ÁÓ^
FJÌF	ތ܌ÞRŒÁŦÒŸU	Úæ&ā-ā&ÁV^ ^]@[}^
	ÒÙÚ\ÞUZŒÁTŒÜ\ŒÁÔ	Úæ&ā-ā&ÁV^ ^]@[}^
	ŠUXÖŒPŠÁŠIÞÖŒ	Úæ&ā-ā&ÁV^ ^]@[}^
FJÏF	Óæ¦¦æ*æ}ÁÒ~!^}ÁŠ	Úæ&ā-ā&ÁV^ ^]@[}^
	Ôæ¦ [•ÁÒå˘æ¦å[ÁŠ	Úæ&ā-ā&ÁV^ ^]@[}^
	0¦iæ¦c^ÁÜ^^ } [ å[	Úæ&ā-ā&ÁV^ ^]@[}^
	Šæ}å^¦[∙ÁÜæ{[}	Úæ&ā-ā&ÁV^ ^]@[}^
FJÎÏ	Ö^ *æå[أُمُعَتَهُ] هُلُكُ اللُّ	Úæ&ā-ā&ÁV^ ^]@[}^
	Ü[∙^}-^ åÁTæ¦^	Úæ&ā-ā&ÁV^ ^]@[}^
	Ùæ c: { æ}ÁÙæ¦æ@	Úæ&ā-ā&ÁV^ ^]@[}^
FJÎG	Ö^c¦ [ācÁŒ] c∙	Úæ&ā-ā&ÁV^ ^]@[}^
	Ü[∙^}-^ åÅTæ¦^	Úæ&ā-ā&ÁV^ ^]@[}^
	Ùæ c: { æ}ÁÙæ¦æ@	Úæ&ā-ā&ÁV^ ^]@[}^
FJIG	ÓÒÜÞÙVÒQÞÁÚ@ä  ā]ÁPÁÒæc@^¦Á& [Á& }¦	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	ÔŠŒÜSÁP^ {	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	ÔŠŒÜSÁÙ@ā¦ ^^ÁŦ¦∙	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	ÔUPÒÞÁÓ^¦}i&^	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È

# <u>Gc i fWY</u>

Š[•ÁŒ}\*^|^•ÁÖä¦^&c[¦^ÁÔ[È Š[•ÁŒ}\*^|^•ÁÖä¦^&c[¦^ÁÔ[È Š[•ÁŒ}\*^|^•ÁÖä¦^&c[¦^ÁÔ[È

### IJÎÏ€GHĖÍ

<u>MYUf</u>	<u>I gYg</u>	<u>GcifWY</u>
FJIG	Öæ&@ { æ}ÅÒ∙c@^¦ÅT¦•Å { * ¦ÅÖ^c¦ [ ācÅŒ] c•	Š[•ÁŒ}*^ ^•ÁÖå!^&c[¦^ÁÔ[È
	Öæ&@ { æ}ÅTæ¢ÅÒ∙c@^¦Å∙ • { }	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Ö^c¦[ácÁŒ]æ¦c { ^}c∙	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Ö˘à}^¦ÅÞæc@æ}ÅYÅTæ¦^	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Ò[~ÁPÁX	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	ØÜÒQÖTŒÞÁ₽^}¦^Á• •{}	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	ØÜQÒÖ⊤ŒÞÁ₽榦ã•ÁŒ}}æÁ•@[^Á¦^]¦	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Õ^!•@ÅØ¦å^åæÅT¦•Å][` c¦^	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Õ^¦•\[çāc:ÁÓ^}bÁ& \	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	ŠŒYÙÁY {ÁY	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	ŠÒXŸÁŒ àcÁAÁØæ^Á}[cã[}•	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	ŠÒXŸÁRæ&\ÁØæ^^	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	T [ •^•Á₽榦^ÁÔ æ¦æÁ&  [ Á&  } ¦	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Ü[•^}ÁP榦^Á• • { }	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	ÜUÙÒÞØÒŠÖÁÖiæ}æÁà^æ˘ċ^Á[]¦	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	ÜUÙÒÞØÒŠÖĺÒ`*ĺålåç^l	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	ÜUÙÒÞØÒŠÖÁQ•æà^ Á¸ååÁÙæ {	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Üčåæ}ÁÕ^[ÁVÁ•cæÁæcåc	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Ùæ { [ [çāc:ÁÓ^}b	Š[•ÁŒ}*^ ^•ÁÖå!^&c[¦^ÁÔ[È
	Ù&@ā~ÁÒ`*Á• • { }	Š[•ÁŒ}*^ ^•ÁÖå!^&c[¦^ÁÔ[È
	Ù&@ā~Á₽^}¦^ÁŠÁŠ^^Ábæ}	Š[•ÁŒ}*^ ^•ÁÖå!^&c[¦^ÁÔ[È
	ÙÔP Y ŒÜVZÁÓ^}bÁÓ^¦}ã&^	Š[•ÁŒ}*^ ^•ÁÖå¦^&c[¦^ÁÔ[È
	ÙÔPYŒÜVZÁÓ^¦}&^Áà}å¦^Á¸\¦	Š[•ÁŒ}*^ ^•ÁÖå¦^&c[¦^ÁÔ[È
	ÙVÒQÞÁY {Á&à*榕	Š[•ÁŒ}*^ ^•ÁÖå¦^&c[¦^ÁÔ[È
	XIÔVUÜÁPæcci^ÁT¦•	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
FJHÏ	ÓÒÞRŒTQÞÁئæ} \Ácæä [¦	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Ó¦[ , }•c^ä}ÁØæ} }^	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Ö^c¦[ācÁŒ]æ¦c { ^}c∙	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	ØQÞSŠÒÁÚ@â á]ÁÖÀÒâ}æÁ[∽ã&^Á{ * ¦ÁŒ{Á T^¦&@æ}åã∙^ÁÔ[	Š[•ÁŒ}*^ ^•ÁÖä!^&c[!^ÁÔ[È
	Ølæ}\ÁÓ^}b	Š[•ÁŒ}*^ ^•ÁÖå!^&c[¦^ÁÔ[È
	ØÜŒÞSŠQÞÁÒ¦}^•¢ÁV@^¦^•æ	Š[•ÁŒ}*^ ^•ÁÖå¦^&c[¦^ÁÔ[È
	Pæ¦cÁŒ¦c@ÁÁ⊤æ¦&^ ^cc^	Š[•ÁŒ}*^ ^•ÁÖå!^&c[¦^ÁÔ[È
	S[¦}à æccÁP^¦àcÁR^æ}Á& \	Š[•ÁŒ}*^ ^•ÁÖå!^&c[¦^ÁÔ[È
	S[¦}à æccÁR^æ}ÁT¦•Á{*!ÁÖ^c¦[ācÁŒ]c•	Š[•ÁŒ}*^ ^•ÁÖå¦^&c[¦^ÁÔ[È
	Š^lc: {	Š[•ÁŒ}*^ ^•ÁÖå!^&c[¦^ÁÔ[È
	ŠÒXŸÁÒc@^ ÁT¦•	Š[•ÁŒ}*^ ^•ÁÖå!^&c[¦^ÁÔ[È
	ΤŒÞÖÒŠŠÁΡ^ { ^}ÁR^} }å^	Š[•ÁŒ}*^ ^•ÁÖå!^&c[¦^ÁÔ[È
	TŒÜSÙÁÒå ÅÒçæÁ& \	Š[•ÁŒ}*^ ^•ÁÖå!^&c[¦^ÁÔ[È

:=B8=B;G

<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
FJHÏ	T^}åĺÞæc@æ}ĺ { ^æc∙	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
FJHH	ÔUUÚÒÜÁŠ [ ˘ă+ÁÒ+c@^ ¦Ácæä  [ ¦	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Òā•ā}ÅÔ@æ•Á { æ&@Á [ ] ¦	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	ÕÜÒÒÞÓÒÜŐÁQ•ææ&Á~`¦}	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Ùæ c: { æ}ÅŒà¦ÅÞ^ccā^Åā}∙Åæ*c	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
FJGJ	TŒÜÝÅŒà¦ÅÓ^∙∙ā^Å∙@[^•	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Þæc@æ}•[}ÅÖæçååÅÒçæÅ]¦å}c^¦	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	1	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Ü[•^}àæ`{\Ó^¦}æ¦å\Ti}}i^\}[ç^ c^\@æd {~¦	Š[•ÁŒ}*^ ^•ÁÖå!^&c[¦^ÁÔ[Ė
	Ü[•^}àæ`{ÅR[●Å@	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Ù\ ^¦ÁŒà¦ÁÓ^æc¦ã&^Á&æ¦]Á@	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Ÿæ&@cÁÔ@æ¦ [cc^Á• • å^Á¦	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Ÿæ&@cÁŬ[•^ÁT¦•Á@	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Ó æ}&ÀÙ[ ÁÓ^••ā^Áæ`&cā[}^^¦	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Ó`¦å { æ}ÅP榦^	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Ó`¦å { æ}ÁQ¦çi}*Á•`¦çÁÔ[ÁÜ[æåÁÖ^]c	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Ö^c¦[ácÁŒ]æ¦c { ^}c∙	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Ò]∙c^ã}ÁÓæ¦}^^	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	ØÜŒÞSÒŠÁP榦^ÁÙÁÔ \	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	ØÜŒÞSÒŠÁŠ^}æÁŦ¦•	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Õacc^ •[}ÅT[!¦ā•ÀÚ^æ! Åb, ¦	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	ÕÜÒÒÞÓÒÜŐÁQ•ææ&ÁÙ[]@iæÁæ]c•	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Õ¦`}å^ÁŠ[`ã∙Á₽^ ^}Å∙ ∙ { }	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	S[] [^ÁÙ^ààà*	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Šā}å^}àæ`{ÁŒà!ÁR^}}ā^Á&æ¦]	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Z^&& ^¦ÁÙ[ ÁZ^&& ^¦ÁÓ¦[•Á¦	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
FJGI	ÔUPÞÁÓ^} }ǎ^ÁÚæ&à-à&ÁÔ[æ•cÁÞ[cá[}ÁÔ[Á!	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	ÜWÓÒÞÙVÒQÞÁTæ¢ÁŠ[•ÁŒ}*^ ^•ÁR`}\ÁÔ[Á @	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[Ė

#### %%\*``B`GCHC

<u>MYUf</u>	<u>I gYg</u>	<u>GcifWY</u>
FJJ€	UÜUZÔUÁŠÒUÞŒÜÖU	Úæ&ā-ā&ÅÓ^
FJÎÏ	Š[]^:ÁØ [¦æ	Úæ&ā~ā&ÁV^ ^]@[}^
FJIG	ÕÜÒÒÞÓÒÜÕÅÓ^}bÁÙæ¦æ@	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
FJHÏ	Ó`&@æ c^¦ÁY {ÁŒ}}å^Åå¦åç^¦	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
FJGJ	SŠÒQÞÁÓ^c•^ÁT¦•	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
FJGI	Y UŠØÁÜæ ,	Š[•ÅŒ}*^ ^•ÅÖä!^&c[¦^ÅÔ[È

#### %&%<sup>...</sup>B<sup>.</sup>GCHC

<u>MYUf</u>	<u>  g Y g</u>	<u>Gc i fWY</u>
FJJ€	ÚÒÖÜUÙŒÁŠWÜÖÒÙ	Úæ&ā-ā&ÁÓ^
FJÌÎ	ŠÒUÞÁTÒŠÖŒ	Úæ&ā-ā&ÁÓ^
FJÌF	ÕŒÜÔŒÁÚŒÙÔWŒŠÁÜ	Úæ&ā-ā&ÁV^ ^]@[}^
FJÏF	Ú^¦^:ÅXā&c[¦āæ	Úæ&ā-ā&ÁV^ ^]@[}^
FJÎÏ	Œ¦æ`b[ÁØ^ ā¢	Úæ&ā-ā&ÁV^ ^]@[}^
FJIG	ØÒÖÖÜÁÚæ˘ ÁÔ^ ǎæÁ&  \	Š[●ÁŒ}*^ ^●ÁÖã¦^&c[¦^ÁÔ[Ė
	Õäà ä}ÅXä&c['Å₽ÅTæ¦*`^¦āc^Å^ ^çÅ[]¦	Š[●ÁŒ}*^ ^●ÁÖã¦^&c[¦^ÁÔ[Ė
FJHÏ	ŒŒÜUÞÁŒà¦Áàælc}å¦	Š[●ÁŒ}*^ ^●ÁÖã¦^&c[¦^ÁÔ[Ė
	Öä^c&@Á⊤ÁQ•¦æ^ ÁÞ^••ā^Á&æcc ^Áà˘^^¦	Š[●ÁŒ}*^ ^●ÁÖã¦^&c[¦^ÁÔ[Ė
	Õ¦æ}cÁŒà¦Á⊤å}}å^Á&àc{\¦	Š[●ÁŒ}*^ ^●ÁÖã¦^&c[¦^ÁÔ[Ė
FJGJ	ÓČåiæ}ÁÒ iÁÙæ¦æ@Á& [Á& }¦	Š[●ÁŒ}*^ ^●ÁÖã¦^&c[¦^ÁÔ[Ė
	Y^i•à^¦*ÁQ∙æå^¦•Á@	Š[●ÁŒ}*^ ^●ÁÖã¦^&c[¦^ÁÔ[Ė
	Y ^ã•à^¦*ÁRæ&\Á• • { }Á¦	Š[●ÁŒ}*^ ^●ÁÖã¦^&c[¦^ÁÔ[È
	Y ^ã•à^¦*ÁT ^ ^¦Á]  { à¦Á¦	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Y ^ã•à^¦*ÁÙ^ çãæÅ● ● å^Á¦	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
FJGI	0	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
% <b>\$'</b> `%#&``E	B'GCHC	
<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
FJÌF	ZŒXŒŠŒÁÜŒŸŦ₩ÞÖUÁÕ	Úæ&ä~å&ÅV^ ^]@[}^
%%*`%# <b>&amp;</b> ``E	3 <sup>°</sup> GCHC	
<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
FJJ€	UÜUZÔUÁŠÒUÞŒÜÖU	Úæ&ā~ā&ÅÓ^
%%,`%# <b>(</b> ``E	3 <sup>°</sup> GCHC	
<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
FJÌÎ	ÜWÓQUÁTŒÜQŒ	Úæ&ā-ā&ÁÓ^
FJÌF	ÜWÓQUÁTŒÜQŒ	Úæ&ä~å&ÅV^ ^]@[}^
<u>B'GCHC</u>	<u>`GH</u>	
%\$'``B`GC	CHC.CH	
<u>MYUf</u>	<u>IgYg</u>	<u>Gc i fWY</u>
FJÍÌ	Þ`}^:ÁÖæ}∣ÁT	Úæ&i&ÅV^ ^]@[}^
%\$,``B`GC	CHC'GH	
<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>

ÕUÞZŒŠÒZR[•^

G€€Î

#### <u>MYUf</u> lgYg

G€€Î	Õ`æåæ `]^
	ÕUÞZŒŠÒÙ
	ŒŠXŒÜÒZÁ⊤æ¦iæ
	ŒÚŒÜVTÒÞVÙ
	ÜÒŸÒÙV^¦^∙æ
	TÒZŒÙæ} ˘^
	Q
FJÏÎ	Õ^}^¦æ ÁÓ˘∙å}^∙∙
FJÍÌ	Ræ}^●ÁÓ^æ˘c^ÁÙæ [}

#### %\$-``B`GCHC`GH

<u>MYUf</u>	lgYg
G€€Î	ÔŒÚQŠŠŒ₽^&į[¦
FJÍÌ	Õ¦[••à^¦*ÁÙåå}^^

#### %%\$"B'GCHC'GH

<u>MYUf</u>	<u>I gYg</u>
G€€Î	ŒÁBÁÓÁŒWVUÁÓUÖŸ
FJÏÎ	Tæå¦i*æ ÁŒčc[ÁÙ^¦çi&^
FJÍÌ	Ù[c[ÁÓ[å^ÁBÁØ^}å^¦ÁÙ@[]
	Tæ¦çã}ÅÓ˘ã∣å^¦∙
	R[^•ÁW]@[ ∙c^¦^ÁÙ^¦ç

#### %%%<sup>••</sup>B<sup>·</sup>GCHC<sup>·</sup>GH

FJÏÎ

<u>MYUf</u>	<u>  gYg</u>
FJÍÌ	ئ^∙&æ∙ÅŒ}}æÅU
%%)``B`GC	CHC.CH
<u>MYUf</u>	<u>IgYg</u>
G€€Î	ŒÚŒÜVTÒÞVÙ
	ÖQCEZÜ ~ c@
	PÒÜÞŒÞÖÒZÁT <i>æ</i> iæ
	P≬ÕWÒÜŒÔ[}•`^ [
	ŠWÔÒÜUÁTæ¦c@æ

TÒÞÖÒZÒ`|[\*iæ ÙŒÞÔPÒZÁÜæ`| XQÜÕÒÞÁÕ^[¦\*^

ᆬc¦^||[}ÁŸ[|æ}åæ

Œ^ælæÁR^•`• Œ^æ|æÁXā&c[¦

#### <u>GcifWY</u>

Pæi}^•ÅÔ[{]æ}^ÊÁQ}&È Pæi}^•ÁÔ[{]æ}^ÊÁQ}&È Pæi}^•ÅÔ[{]æ}^ÊÁQ}&È Pæi}^•ÅÔ[{]æ}^ÊÁQ}&È Pæi}^•ÁÔ[{]æ}^ÊÁQ}&È Pæi}^•ÁÔ[ { ]æ} ^ÊÁQ}&È Pæi}^•ÁÔ[{]æ}^ÊÁQ}&È Úæ&ā~ā&ÁV^|^]@[}^ Úæ&ā~ā&ÁV^|^]@[}^

#### <u>GcifWY</u>

Pæi}^•ÁÔ[{]æ}^ÊÁQ}&È Úæ&ā~ā&ÁV^|^]@[}^

#### <u>Gc i fWY</u>

Pæi}^•ÁÔ[{]æ}^ÊÁQ}&È Úæ&ā~ā&ÁV^|^]@[}^ Úæ&ā~ā&ÁV^|^]@[}^ Úæ&ā~ā&ÁV^|^]@[}^ Úæ&ā~ā&ÁV^|^]@[}^

#### <u>GcifWY</u>

Úæ&ā~ā&ÁV^|^]@[}^

#### <u>GcifWY</u>

₽æi}^•ÁÔ[{]æ}^ÉÁQ}&È
Pæi}^•ÁÔ[{]æ}^ÊAQ}&È
Pæi}^•ÁÔ[{]æ}^ÊAQ}&È
Pæi}^∙ÁÔ[{]æ}^ÉAQ}&Ė
Pæi}^∙ÁÔ[{]æ}^ÉAQ}&Ė
Pæi}^∙ÁÔ[{]æ}^ÉAQ}&Ė
Pæi}^∙ÁÔ[{]æ}^ÉAQ}&Ė
Pæi}^•ÁÔ[{]æ}^ÊÁQ}&È
Úæ&ā~ā&ÁV^ ^]@[}^
Úæ&ā~ā&ÁV^ ^]@[}^
Úæ&ā~ā&ÁV^ ^]@[}^

IJÎÏ€GHËÍ

<u>MYUf</u>	<u>I gYg</u>
FJÏÎ	Õ[}:æ ^:ÅÜ[à^¦c[
	T^}å^:ÁŠ^åiæ
	Þæçæ¦Á⊤æ¦iæ
	Ü[å¦å*`^:ÁTà*`^
	Xå  æ∙^} [ ¦ÁÜ [ à^¦c[
FJÍÌ	Ö^c¦[ācÁŒ]c●
	Ü[•^}~^ åÁTæ¦^
	Ùæ∣c:{æ}ÁÙæ¦æ@

#### %%\*``B`GCHC`GH

#### <u>MYUf</u> <u>IgYg</u>

G€€Î	ÔŒÙVÜUŒ[}•[
	P≬ÖŒŠÕUÁÒ`∙æ^à [
FJÍÌ	Tā^æ∙@ä¦ſÁΥ {ÁÙ

#### %%,<sup>...</sup>B<sup>.</sup>GCHC<sup>.</sup>GH

<u>MYUf</u>	<u>I gYg</u>	<u>Gc i 1</u>
G€€Î	₽ÒÜÞŒÞÖÒZÁÜ[à^¦c[	Pæi}′
	ŠUÚÒÙÁÞiåiæ	Pæi}/
FJÍÌ	Ôæ { æ¦* [ ÁV [ } ^	Úæ&ā~
	Š`}æĺÕ`æåæ `]^	Úæ&ā~

#### %&%<sup>...</sup>B<sup>.</sup>GCHC<sup>.</sup>GH

<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
G€€Î	Þ[ÁÔ`!!^}cÁŠā•cā}*	₽æå}^•ÅÔ[{]æ}^ÊÁQ}&È
FJÍÌ	Ø^å^¦ÅÚæ`	Úæ&ā~ã&ÁV^ ^]@[}^

#### G'6fYYX'Gh

#### %&\*``G`6fYYX`Gh

<u>MYUf</u>	<u>I gYg</u>
G€F€	ŒXUÞÁÖQÙVÜQÓWVUÜ
	ŒXUÞÁÖQÙVÜQÓWVUÜ

#### %**'\$**``G`6fYYX`Gh

<u>MYUf</u>	lgYg
G€FI	TŒÞWÒŠÁUŠŧXŒÜÒÙÁØŠUÜ
	ΤŒÞWÒŠÁIJŠQXŒÜÒÙÁØŠIJÜ

#### <u>GcifWY</u>

Úæ&ā~ā&ÁV^ ^]@[}^
Úæ&ā~ā&ÁV^ ^]@[}^
Úæ&ā~ā&ÁV^ ^]@[}^
Úæ&ā~ā&ÁV^ ^]@[}^
Úæ&ā~ā&ÁV^ ^]@[}^
Úæ&ā~ā&ÁV^ ^]@[}^
Úæ&ā~ā&ÁV^ ^]@[}^
Úæ&ā~ā&ÁV^ ^]@[}^

#### <u>Gc i fWY</u>

Pæi}^•ÅÔ[{]æ}^ÊÁQ}&È Pæi}^•ÁÔ[{]æ}^ÊÁQ}&È Úæ&ā~ā&ÁV^|^]@[}^

#### <u>fWY</u>

^•ÁÁÔ[{]æ}^ÊÁQ}&È ^•ÁÁÔ[{]æ}^ÊÁQ}&È á&ÁV^|^]@[}^ á&ÁV^|^]@[}^

### <u>GcifWY</u> ÒÖÜÁÖå\*ácæ|ÁŒ¦&@áç^ ÒÖÜÁÖã\*ãcæ|ÁŒ¦&@ãç^

<u>GcifWY</u> ÒÖÜÁÖå\*icæ|ÁŒ¦&@iç^ 

### IJÎÏ€GHĖÍ

:=B8=B	;	G
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#### <u>G'GCHC</u>

#### %%\$``G`GCHC

<u>MYUf</u>	<u>  gYg</u>	<u>Gc i fWY</u>
FJJ€	ÔŒÜÜQŠŠUÁŒÔÒŠŒ	Úæ&ā-ā&ÁÓ^
	ÔÒÜXŒÞVÒÙÁŦŒÜVQÞÁÙŒÞÖUXŒŠ	Úæ&ā-ā&ÁÓ^
	ÖÒŠÁÜÒŒŠÁPUVÒŠ	Úæ&ā-ā&ÁÓ^
FJÌÎ	ÔÒÜXŒÞVÒÙÁŦŒÜVℚÞÁÙŒÞÖUXŒŠ	Úæ&ā-ā&ÁÓ^
	PÒÜÞŒÞÖÒZÁZÒÞŒIÖŒ	Úæ&ā-ā&ÁÓ^
	ŠÒUÞÁÔUÞÜŒÖUÁT	Úæ&ā-ā&ÁÓ^
FJÌF	ÓÒÞIVÒZÁRUÙÒ	Úæ&ā-ā&ÁV^ ^]@[}^
	ÜUÖÜQÕWÒÙÁTŒÜQŒ	Úæ&ā-ā&ÁV^ ^]@[}^
FJÏF	ŒĮçæ¦^:ÁÙæài}æ	Úæ&ā-ā&ÁV^ ^]@[}^
	Ò∙]å}[:æÁŒ`¦[¦æ	Úæ&ā-ā&ÁV^ ^]@[}^
	Pæi&@ÁÙc^ç^ÁÙ	Úæ&ā-ā&ÁV^ ^]@[}^
	V^  ^•ÅV@[•	Úæ&ā-ā&ÁV^ ^]@[}^
FJÎÏ	Ò∙]å}[:æÅŒ`¦[¦æ	Úæ&ā-ā&ÁV^ ^]@[}^
	Pæi&@ÁÙc^ç^ÁÙ	Úæ&ā-ā&ÁV^ ^]@[}^
	V^  ^•ÅV@[•	Úæ&ā-ā&ÁV^ ^]@[}^
FJIG	Œå ^¦ÁŒ}}æ	Š[•ÁŒ}*^ ^•ÁÖã!^&c[¦^ÁÔ[È
	Ô[  å}*^\ÁTæ¦ci}	Š[•ÁŒ}*^ ^•ÁÖã!^&c[¦^ÁÔ[È
	Ô[  å}*^¦ÁÙæ¦æ@	Š[•ÁŒ}*^ ^•ÁÖã!^&c[¦^ÁÔ[È
	ÔUÞŠÒŸÁÞ^çæÁ { *¦ÁYǎ•&[}•ǎ}ÁŒ]ċ•	Š[•ÁŒ}*^ ^•ÁÖã!^&c[¦^ÁÔ[È
	S^¦•}^¦ÁŒ àcÁ& \	Š[•ÁŒ}*^ ^•ÁÖã!^&c[¦^ÁÔ[È
	Tæ}å^ àæັ{Â∿ææ&	Š[•ÁŒ}*^ ^•ÁÖã!^&c[¦^ÁÔ[È
	ÚÒÜÜŸÁ₽æ!!^ÁÙÁœæi [¦	Š[•ÁŒ}*^ ^•ÁÖã!^&c[¦^ÁÔ[È
	ÜQÔÒÁÜ&@åÁT	Š[•ÁŒ}*^ ^•ÁÖã!^&c[¦^ÁÔ[È
	ÜWÓℚÞÁÖ[¦æ	Š[•ÁŒ}*^ ^•ÁÖã!^&c[¦^ÁÔ[È
	Ù&@ æ { [çic&@ÁRæ&[à	Š[•ÁŒ}*^ ^•ÁÖã!^&c[¦^ÁÔ[È
	ÙTQVPÁTæ¦^ÁÙ	Š[•ÁŒ}*^ ^•ÁÖã!^&c[¦^ÁÔ[È
	Yā•&[}•ā}ÁŒ]æ¦c{^}c•	Š[•ÁŒ}*^ ^•ÁÖã!^&c[¦^ÁÔ[È
FJHÏ	PUÜUY®VZÁP	Š[•ÁŒ}*^ ^•ÁÖã!^&c[¦^ÁÔ[È
	RŒŦÒÙUÞÁŒ}}æÁ¸ååÁQ∙æå[¦^	Š[•ÁŒ}*^ ^•ÁÖã!^&c[¦^ÁÔ[È
	Τ&ÁΧŒϔÁØ [¦æÁ}č¦∙^	Š[•ÁŒ}*^ ^•ÁÖã!^&c[¦^ÁÔ[È
	Þæåæ}^¦ÁÚæ` ÁÕÅå^}cæ Ác^&@}	Š[•ÁŒ}*^ ^•ÁÖã!^&c[¦^ÁÔ[È
	Úč¦çã•ÁR[@}ÁTæ¦^	Š[•ÁŒ}*^ ^•ÁÖã!^&c[¦^ÁÔ[È
	Ù&@ } ^  ÅÒ ā:	Š[•ÁŒ}*^ ^•ÁÖã!^&c[¦^ÁÔ[È
	ÙTQVPÁTæ¦^ÁÙÁ¸ååÅŠ`&ã`∙	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
FJHH	Šæ, ¦^}&^ÅØ [¦æ	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È

<u>MYUf</u>	<u>I gYg</u>	<u>GcifWY</u>
FJHH	Tå}&^!ÁTæ!^ÁT¦●	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	ÜÒÙÞQÔSÁX^¦æÁT¦•	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	ÜlÔPŒÜÖÙUÞÁR^••^ÁÓÁTæ^ÁŠÁ{^c^¦{}Å ŠŒÕÁBÁÔ[¦]	Š[•ÅŒ}*^ ^•ÅÖå!^&c[¦^ÅÔ[È
	ÙÔ₽ÞÒQÖÒÜÁTæ˘¦å&^ÁT[  ^Áàæ\^¦	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Ù&@}^  ÁÒ ā∶Á& ∖	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Ù\æçi}•\^ÁÜæ&@^ Á⊤¦•	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	ÙTQVPÁTæ!^ÁÙÁ¸ååÁŠ`&ã`•	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	ÙWVVUÞÁÜ^[^	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	YŒÜÜÒÞÁܢà^^ÁT¦∙Á& ∖	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
FJGJ	ÓÜU Y ÞÁP^ ^}	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	ÔPŒÙÒÁRæ&\ÁTæ^Á&@æ`~	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	ÖŒÞQÒŠÙÁ⊤æ¦^ÁÒÁ{ã∙∙ã[}æ¦^	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Šæ`àæ&@Áئ^åÁÓ^¦}i&^Ábæ}	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Ùæ`^¦,^i}ÁQåæÁ,iåÁÔ@¦i•cá¦	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Ù&@}^  ÁÒ ã∶Á• • å^Á¦	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Ù&@}^  ÁÒ¦}^•cá¦	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Ù\æç ^}ÁÜæ&@^ ÁT¦^Á¦	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	ÙTQVPÁTæ¦^ÁÙÁ¸iåÁŠ`&i`•Áæ]c•	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Yǎ•&[}•à}ÁŒ]æ¦c{^}c•	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
FJGI	ÕŒÜÖQÞÒÜÁŒ à^¦cæÁc^ ^]Á[]¦Á@	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	ÕŒÜÖQÞÒÜÁΤä}}ä^Á¦	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	SŒWØTŒÞÁTæ¢ĺå¦iç^¦ĺ¦	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Šæçæ*}å}äÁÚ^c^¦ÁRÁ-å!^{}}ÁŠÁŒÁØÁÖÁ@	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	ÚÒVÒÜTŒÞÁÔ˘ŀcå}Á-ãŀ^ { }Á@	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Ú0ÒÜÔÒÁÜ [ •^Á•^æ { Á@	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Ùæ`^¦,^i}ÁQåæÁ,iåÁÔÁÔÁ@	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	ÙÔ₽ÞÒŠŠÁÒ¦}^∙cÁ@	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	ÙPÒÜYUUÖÁÞæ{æ}^^Ác&@¦Á¦	Š[•ÁŒ}*^ ^•ÁÖå¦^&c[¦^ÁÔ[È
	ÙTQVPÁTæ¦^ÁÙÁ¸ãåÁŠ`&ã`•Áæ]c	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Yā•&[}•ā}ÅŒ]æ¦c{^}c•	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È

#### %%%<sup>``</sup>G<sup>·</sup>GCHC

# <u>MYUf IgYg</u>

#### FJJ€ ÓÒÔÒÜÜŒÁÕŒÙÁÙVŒVQUÞ ÕWŒÖŒŠŒRŒÜŒÁŒWVUÁÙŒŠÒÙ ÕWŒÖŒŠŒRŒÜŒÁŒWVUÁÙŒŠÒÙ

 FJÌÎ
 ÕWŒÖŒŠŒRŒÜŒÅŒWVUÁÙŒŠÒÙ

 ÓÒÔÒÜÜŒÁÕŒÙÁÙVŒV0UÞ

#### <u>Gc i fWY</u>

Úæ&ā~ā&ÁÓ^
Úæ&ā~ā&ÁÓ^
Úæ&ā~ā&ÁÓ^
Úæ&ā~ā&ÁÓ^
Úæ&ā~ā&ÁÓ^

<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
FJÌF	ÕWŠØÁUQŠÁÙÒÜXQÔÒÁÙVÞÙ	Úæ&ā~ā&ÁV^ ^]@[}^
FJÎÏ	ŐWŠØÁUQŠÁÙÒÜXÁÙÁVÞÙÁÔ[}cåÁŠ[∙Á Œ}*^ ^•ÁÔ[}cå	Úæ&i-i&İV^ ^]@[}^
FJÎG	Ù[c[ÅÕæ∙ÁÙc}ÁQ}&	Úæ&ā~i&ÁV^ ^]@[}^
%%(``G'G(	снс	
<u>MYUf</u>	<u>IgYg</u>	<u>Gc i fWY</u>
FJJ€	VUÜÜÒÙÁRUÒÁŠÁRÜ	Úæ&ā~ā&ÅÓ^
FJÌÎ	VUÜÜÒÙÁRUÒÁŠÁRÜ	Úæ&ā~ā&ÅÓ^
FJÌF	VUÜÜÒÙÁRUÒÁŠÁRÜ	Úæ&ā~ā&ÁV^ ^]@[}^
FJIG	Õ`^!!^![ÁR` ã[ÁÔÁ^}*Á& }'ÁWÚÜÜÁÔ[	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	R˘æ}α  ●ÁÒ˘*ÁŠ˘]^	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	S^ă •[}ÁÙ@à¦ ^^Á¦^•c¦ \	Š[●ÁŒ}*^ ^●ÁÖä¦^&c[¦^ÁÔ[Ė
	Š`&æ●ÁŒ}å¸Á⊤æ¦å^	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	T^biæÁÓ^¦}æ¦åÁÔ[}}i^Áàæ¦à^¦	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	ÕUŠÖÓÒÜÕÁÖæ} ÁØ^¦}Áà\]¦	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
FJHÏ	U¦ äæ}ÁÙæ{ Á& [Á& }¦	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	∪¦ àbæ}ÅØæ}&@[}Å+ •,}	Š[●ÁŒ}*^ ^●ÁÖã¦^&c[¦^ÁÔ[Ė
	U¦ ābæ}ÁŒ}}ã^Á¸ã&ÁP^}¦^	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Õ¦[••^ÁÙ@ã¦ ^^Á¦^•c¦ \	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Õ¦[••^ÅÜæ&@^	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Õ¦[••^ÅŒ ~	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Õ¦[••^ÁÔ æ¦æÅ¸iåÁÒå¸	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
FJHH	Ò∙c¦æåæÅÔ¦˘∶Å& \	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Ræ [~~ÁÓ^¦}ā^Ácæā [¦	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	U¦ äæ}Å₽^}¦^ÁŒ}}å^	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	U¦ ằæ}ÁÙæ{ ÁRÁ& [Á& }¦	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
FJGJ	U¦ åæ}Å₽^}¦^ÅŒ}}å^	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	U¦ ǎæ}ÁÙæ{ ÁRÁ∙ ∙{}ÁŒ{ÁÖ^^ÁY∖∙	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Üã• [ÁÖ^  [ ¦æ•Á¦	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
FJGI	Õ^¦•@[}ÅÕ æå^•ÅÕÅ•c^}[Ŧ	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Õ^¦•@[}ÅTæ¦^Å• •, {}Å!	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	U¦ābæ}ÁÙæ{ āÁcæā [!Á¦	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	@	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[Ė

#### %%,<sup>..</sup>G<sup>.</sup>GCHC

#### <u>I gYg</u> <u>Gc i fWY</u> <u>MYUf</u> FJJ€ Úæ&å~å&ÁÓ^|| ÙŒVUÁRŒÔS Úæ&ā~ā&ÁÓ^|| FJÌÎ ÙŒVUÁRŒÔS

### ÁÔ[È ÁÔ[È ΊÔ[È ÁÔ[È Ί**Ô**[È ÁÔ[È ÁÔ[È ÁÔ[È ÁÔ[È ÁÔ[È Ί**Ô**[È ÁÔ[È Ί**Ô**[È ÁÔ[È ĥÔ[È Ί**Ô**[È ΊÔ[È ÁÔ[È ÁÔ[È

<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
FJÌF	ÙŒVUÁRŒÔS	Úæ&ā~ā&ÁV^ ^]@[}^
FJÏF	Ùæc[ÁRæ&∖	Úæ&ä~i&ÁV^ ^]@[}^
FJÎÏ	Ùæc[ÅRæ&∖	Úæ&å~å&ÅV^ ^]@[}^
FJÎG	Ùæc[ÁRæ&∖	Úæ&ä~i&ÁV^ ^]@[}^
FJIG	Ucæ}åÁŒāÁ]@^●	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
FJHH	Ôæ¦åi^ ÁTæ¦&`•ÁTæ¦^Á æà	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Ucæ}āÁŒāÁ]@^●	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
FJGJ	Ucæ}åÁŒ Á]@^●	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Ucæ}āÁV[^[č¦[ÁŒā	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
FJGI	Uccæ}ālV[^[åi [Å@	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Ucæ}åÁVÁ&[ { {ã••ã[}Á { ^¦&@æ}cÁ@	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È

#### %&(``G`GCHC

<u>MYUf</u>	<u>IgYg</u>	<u>Gc i fWY</u>
FJJ€	SŒYŒTUVUÁRŒÔSÁS	Úæ&ā~ā&ÅÓ^
FJÌÎ	SŒYŒTUVUÁRŒÔSÁS	Úæ&ā~ā&ÅÓ^
FJÌF	SŒYŒTUVUÁRŒÔSÁS	Úæ&ā~ā&ÁV^ ^]@[}^
FJÏF	S[{`![ÁÙ	Úæ&ā~ā&ÁV^ ^]@[}^
FJÎÏ	S[{`![ÅÙ	Úæ&ā~ā&ÁV^ ^]@[}^
FJÎG	S[{`![ÅÙ	Úæ&ā~ā&ÁV^ ^]@[}^
FJIG	0}[`^^ÁÕ`}*[ÁSæ}^	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	0} [ ~ ^^ÁÙ^ää&@ä	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
FJHÏ	Õ[ åÅP榦^ÁÒçæÅ• •{}ÅÕÅŒÅT&&@^ ÅÔ[	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
FJHH	ÙÔPWŠVZłÖæçãå	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[Ė
FJGJ	ÕUŠÖÁP榦^ÁÒçæ	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[Ė
FJGI	ÒXÒÜÒVVÁY { ÁŠÁ { ^&@Á@	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	S[] æ}ÁTæ¢Å• •{}ÅQ•ææ&ÅÕ¦`{æ}c^ Å	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È

#### %&)<sup>...</sup>G<sup>.</sup>GCHC

<u>IgYg</u>

<u>MYUf</u>

Gc	i	fWY

FJÌÎ	ΤŒVÙWTUVUÁΤŒÙŒΤQ	Úæ&å~å&ÅÓ^
FJÌF	ΤŒVÙWTUVUÁΤŒÙŒΤQ	Úæ&ā-ā&ÁV^ ^]@[}^
FJÏF	Ü[{^¦[ÅR[^ÁÒ	Úæ&ā-ā&ÁV^ ^]@[}^
	⊤æc•`{[c[Á⊤æ•æ{å	Úæ&ā-ā&ÁV^ ^]@[}^
FJÎÏ	⊤æc•`{[c[Á⊤æ•æ{å	Úæ&ā-ā&ÁV^ ^]@[}^
FJIG	Þæ\æ}[ÁÒ¦}^•cÁÙ@ā: `^	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Ùæc[ÁQ,æ}[•˘\^ÁÙ^ã\[	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
FJHÏ	Ùæc[ÁØ˘{ã\[	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Ùæc[ÁQ,æ}[•`\^ÁÙ^ā\[Á-¦`āc•	Š[•ÁŒ}*^ ^•ÁÖå¦^&c[¦^ÁÔ[Ė

<u>IgYg</u>	<u>GcifWY</u>
Ùæc[ÁŸ[∙@ã^^	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
Þæ\æ}[ÁÙæåæ[ÁÙ@ā: ˘^	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
₽ÒÞÜŸÁR[●^]@ã}^Á¦	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
ΡὸϷÜΫ́ΑΡ˘*@ΆΡĂ@	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
₽æ^}^ ÁΥ {Á]æã}c^¦	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
Pæ^}^ ÁØ [¦^}&^Á{ä  ã}^¦Á	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
₽æ^}^ ÁÔæ¦¦ā^Á¦	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	<u>ΙgYg</u> Ùæc[ÁŸ[•@å^^ Þæ\æ}[ÁÙæåæ[ÁÙ@å: ັ^ ΡÒÞÜŸÁR[•^]@å}^Á! ΡÒÞÜŸÁP`*@ÁΡÁ@ Pæ^}^ ÁY {Á]æå}c^! Pæ^}^ ÁØ [!^}&^Á{ä] å}^!Á! Pæ^}^ ÁÔæ!!å^Á!

#### %&-``G`GCHC

#### <u>MYUf</u> <u>I gYg</u> F,

### <u>GcifWY</u>

FJJ€	ØŠUÜÒÙĺÒŠŧZŒÓÒVP	Úæ&ā~ā&ÅÓ^
FJIG	Tǎ^æ•æ\ǎÁÙ@à}:[ÁTǎc•`^Áå¦ǎç^¦	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
FJHÏ	Qc[\æ¸æÁVÁÞ˘āÁ¸ā}å[¸Ác¦{¦ÁP[¦āÁÓ¦[∙	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
FJGJ	ÓÒÜÞÙVÒQÞÁÖæçiåÁcæi [¦	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
FJGI	ŠŸUÞÁTæŀb[¦å^Á¦	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	ŠŸUÞÁئ^åÁÞÁ&[  ¦ÁŠÁŒÁÕæ•ÁBÁÒ ^&ÁÔ[¦]Á@	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È

#### %'%``G`GCHC

#### <u>Gc i fWY</u>

<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
FJÌÎ	ތՌŴVÙWÞÒSU	Úæ&ā~ā&ÁÓ^
FJÌF	ތՌŴVÙWÞÒSU	Úæ&ā~ā&ÁV^ ^]@[}^
FJÏF	Þæ*æiÁ⊤æ∙æi&@i¦[	Úæ&ā~ā&ÁV^ ^]@[}^
FJÎÏ	Þæ*æiÁ⊤æ∙æi&@i¦[	Úæ&ā~ā&ÁV^ ^]@[}^
FJÎG	Þæ*æiÁ⊤æ∙æi&@i¦[	Úæ&ā~ā&ÁV^ ^]@[}^
FJIG	U\`åæÁPã{*![Á\ā	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
FJHÏ	Så¦\{æ}ÅY{ÅR	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Så! \ { æ}ÅY { ÅRÅb!Å&  \	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Ùc^ â} * ÁŒ àcÁÜÁ [&\•{ ãc@	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
FJHH	Ò]]^ ÁŒ}}æÁ¸ãåÁXæ ^}cã}^	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Så¦\ { æ}ÁY { ÁRÁTæ¦^ÁÙÁ• • { }	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	U∙ã&\ÁÙã^\ÁŒ çã}æÁ⊤Á∙c^}	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	U∙ā&\ÁÚæ`	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
FJGJ	U∙*[[åÁÔ@æ•Á-ã¦^{}	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	U∙ã^\ÁŒ çã}æÁ&[	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	U●ā^\ÁŒ}}æÁ}`¦●^	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Y UŠØÙUÞÁT [¦¦ã∙Á { ັ∙ā&āæ}Á¦	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
FJGI	Ó[}å˘\æ}cÁÔ æ\^}&^ÁŒÁ@	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Ó[}å`læ}‹dÒ  æÁl	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	U•*[[åÅÔ@æ•ÅÓÅ@[•c ^¦Å¦	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[Ė

<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
FJGI	UÙÕUUÖÁTæ¦^ÁŒÁ¦	Š[•ÁŒ}*^ ^•ÁÖå¦^&d
	Xæ}å`¦æ}åÁÚæc\Á& \Á@	Š[•ÁŒ}*^ ^•ÁÖä¦^&c
%'(``G`G(	СНС	
<u>MYUf</u>	<u>lgYg</u>	<u>GcifWY</u>
FJJ€	PÒÜÜÒÜŒÁRUÙÒ	Úæ&ā~ā&ÅÓ^
FJÏF	Œ}å[ÁV[{[\i&@i	Úæ&ā~ā&ÁV^ ^]@[}^
FJÎÏ	Œ}å[ÁV[{[\i&@	Úæ&ā~ā&ÁV^ ^]@[}^
	Pæ∙@ã{[¢[ÁÙæàč¦[	Úæ&ā~ā&ÁV^ ^]@[}^
FJÎG	Pæ∙@ã{[¢[ÁÙæàč¦[	Úæ&ā~ā&ÁV^ ^]@[}^
FJIG	Ÿæ{æ{[c[ÁŠæ, ¦^}&^Á₽^ ^}Å• •{}	Š[●ÁŒ}*^ ^●ÁÖã¦^&d
	Z`&\^¦ {	Š[•ÁŒ}*^ ^•ÁÖã¦^&d
FJHÏ	ØŠÒQÙPÒÜÁÜ^`à^}ÁÜæ^Á&[[]^¦	Š[•ÁŒ}*^ ^•ÁÖã¦^&d
FJHH	Úæ¦cÅØ¦æ} \	Š[•ÁŒ}*^ ^•ÁÖã¦^&d
	Z`&\^¦{ @}ÅP@!!^ÁÓ^••ā^Á]¦ä}c^¦	Š[•ÁŒ}*^ ^•ÁÖã¦^&d
	Z`&\^¦{æ}ÁÜ^çæÁ∙{•c¦∙	Š[•ÁŒ}*^ ^•ÁÖã¦^&d
FJGJ	ÚҌ܊ŦŒÞÁØæ}}ā^Á{ }¦	Š[•ÁŒ}*^ ^•ÁÖã¦^&d
	ÚҌ܊ŦŒÞÁŠĮ˘ã•ÁÕ˘••ã^ÁÚ^æ¦ ^ÁÔ [æ\Á Ù˘āaÁÔ[	Š[●ÁŒ}*^ ^●ÁÖå¦^&0
	ÙVÒÜÞÁY [ -ÁŒ}}æÁ]}c¦Á@	Š[•ÁŒ}*^ ^•ÁÖã¦^&d

### %')``G`GCHC

<u>IgYg</u>

<u>MYUf</u>

e i) e		
FJIF		Uæ&a~a&AV^ ^]@[}^
FJÎÏ	Xæ∣æå^∶ÅR[●^	Úæ&ā~ã&ÁV^ ^]@[}^
FJÎG	Xæ æå^:ÅR[•^	Úæ&ā~ā&ÁV^ ^]@[}^
FJIG	P[ å}ÁŠæ, ^}&^ÁPÁP^} å^ccæÁ{^æc&c	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	P[¦i}&@iÅŠæ, ¦æ}&^ÁPÁb¦Á& \	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
FJHÏ	Š^æ}ÁRæ•ÁÜ[•^	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
FJHH	Š^à[¦ic•ÁÓæ¦`&@ÁŠ^æÁ¦æàài	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
FJGJ	Tæ¦ * ˘ ^∙ÁÙæ {  ÁŸ^ccæÁ&æ¦ ]	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
FJGI	Tæåå^}ÁŠ^[}æÁ	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Tæåå^}ÁŠ^[ÁŒÁ& \Á@	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È

#### %'\*``G`GCHC

<u>MYUf</u>	<u>IgYg</u>
FJÌÎ	ÕUÞZŒŠÒZÁÕWŒÖŒŠWÚÒÁT
FJÌF	ŒÓÒÁŸUÙPQSQ
FJÏF	Τ ̆ læcæÁÒå ,
FJÎÏ	T ĭ ¦æcæÅŸ

Gc	i	fWY

c**[¦^ÁÔ[**È c**[¦^ÁÔ[**È

Úæ&ā~ā&ÁV^ ^]@[}^
Úæ&ā~ā&ÁV^ ^]@[}^
Úæ&ā~ā&ÁV^ ^]@[}^
Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
Š[•ÅŒ}*^ ^•ÅÖå!^&c[¦^ÅÔ[Ė
<u>Gc i fWY</u>
Úæ&ā~ā&ÁV^ ^]@[}^
Úæ&ā~ā&ÁV^ ^]@[}^
Úæ&ā~ā&ÁV^ ^]@[}^

# <u>Gc i fWY</u>

Úæ&ā~ā&ÁÓ^|| Úæ&ā~ā&ÁV^|^]@[}^ Úæ&ā~ā&ÁV^|^]@[}^ Úæ&ā~ā&ÁV^|^]@[}^

### IJÎÏ€GHËÍ

	Ö@ā]¦[}ÅÖ[}∙cæ}&^Á& \Å@	S[•AŒ}*^ ^•AOä¦^&c[¦^AO[E	
"(% <sup></sup> G <sup>.</sup> GCH	(% <sup>··</sup> G <sup>·</sup> GCHC		
<u>MYUf</u>	<u>IgYg</u>	<u>GcifWY</u>	
FJÌF	TÒÞÖUZŒÁŠWÚÒ	Úæ&ā~ā&ÁV^ ^]@[}^	
FJÏF	T^}å[:æÁŠ`]^	Úæ&ā~ā&ÁV^ ^]@[}^	
FJÎÏ	T^}å[:æÁŠ`]^	Úæ&ā~ā&ÁV^ ^]@[}^	
FJÎG	Ùæ•∖å}ÁQ	Úæ&ā~ā&ÁV^ ^]@[}^	
FJIG	Ùc^ ā} *ÁŒ àcÁÜÁÖ [ ¦æÁ  [ & \ • { c@	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È	
	Ùæ•\ã}ÁQ•æå[¦^ÁØæ}}ã^Á& [Á& }¦	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È	
FJHÏ	Ùæ•\å}ÁQ•æå[¦^ÁØæ}}å^Á& [Á& }¦	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È	

#### %

FJJ€	XÒÜÖWZÔUÁTŒÞWÒŠ	Úæ&ā~ā&ÁÓ^
FJÏF	Ÿ[}^^æ{æÅS	Úæ&ā~ā&ÁV^ ^]@[}^
FJÎÏ	ϔ[}^^æ{æ <sup>i</sup> S	Úæ&ā~ā&ÁV^ ^]@[}^
FJÎG	ϔ[}^^æ{æ <sup>i</sup> S	Úæ&ā~ā&ÁV^ ^]@[}^
FJIG	Ô@ä]¦[}ÁŒ{^ ãæÁŠ	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Ô@ā]¦[}ÁÔ[}•cæ}&^ÁÒ	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	ŒÞÖÒÜÙUÞÁP^å¸ã*	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
FJHÏ	Ô@ā]¦[}ÁŒ{^ āæÁŠ	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Ô@ā]¦[}ÅÔ[}•cæ}&^ÁÒ	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
FJHH	Ô@ā]¦[}ÁŒ{^ ǎæÁŠ	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Ô@ā]¦[}ÅÔ[}•cæ}&^ÁÒÅ&\\	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
FJGJ	Ô@ā]¦[}ÁÒ { ā āæ	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Ô@i]¦[}ÅÔ[}•cæ}&^ÀÒÀ¸àc@ÁÓ æ\^ÅT[~-àccÅBÅ V[¸}^	Š[•ÅŒ}*^ ^•ÅÖå!^&c[¦^ÅÔ[È
FJGI	Ô@ā]¦[}ÁŒ{^ ăæÁÒÁ¦	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
	Ô@i]¦[}ÅÔ[}•cæ}&^Å& \Å@	Š[•ÁŒ}*^ ^•ÁÖä!^&c[¦^ÁÔ[Ė
%(%``G`GCH	IC	

#### %(\$``G`GCHC

<u>I gYg</u>

<u>MYUf</u>

<u>MYUf</u>	<u>I gYg</u>	<u>GcifWY</u>
FJÎG	Τ˘ŀæœÅΫ	Úæ&ā~ā&ÁV^ ^]@[}^
FJIG	Z~&\^¦{æ}ÅŒ}}^	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	ZWÔSÒÜTŒÞÁÜ[•^Á•c^}ÁÚæ&ÁT˘•å&ÁÙ˘]]Á Ô[	Š[•ÅŒ}*^ ^•ÅÖä¦^&c[¦^ÅÔ[Ė
FJHÏ	Z~&\^¦{æ}ÁŒ}}æÁ¸ååÁŠ[~å•	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	ZWÔSÒÜTŒÞÁP榦^ÁÓ^••ã^Á]¦ã}c^¦	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
FJHH	Õæ ]^¦å}ÁÒÁŠÁà}●Áæ*c	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Z`&\^¦{æ}ÅŠ[ĭå∙ÁŒ}}æ	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
FJGJ	0	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Z`&\^! {	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
FJGI	:	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È

# :=B8=B;G

<u>Gc i fWY</u>

<u>MYUf</u>	lgYg	<u>Gc i fWY</u>
FJHH	Ùc^ ã} * ÁŒ àcÁŠÁ [&\● { ăc@	Š[•ÁŒ}*^ ^•ÁÖä!^&c[¦^ÁÔ[È
	Ùæ•\ä}ÁRæ&[àÁ• •{}	Š[•ÁŒ}*^ ^•ÁÖãł^&c[¦^ÁÔ[È
	Ùæ•\ã}ÁQ•æå[¦^ÁØæ}}ã^Á& [Á& }¦	Š[●ÁŒ}*^ ^●ÁÖã¦^&c[¦^ÁÔ[È
FJGJ	Ùc^ ā} * ÁŒ àcÁÜÁÖ [ ¦æÁ  [ & \ ● { c@	Š[●ÁŒ}*^ ^●ÁÖã¦^&c[¦^ÁÔ[È
	@	Š[●ÁŒ}*^ ^●ÁÖä¦^&c[¦^ÁÔ[È
	Ùæ•\ã}ÁQ•æå[¦^ÁØæ}}ã^Á& [Á& }¦	Š[●ÁŒ}*^ ^●ÁÖä¦^&c[¦^ÁÔ[È
	@	Š[•ÁŒ}*^ ^•ÁÖä!^&c[¦^ÁÔ[È
FJGI	Ùc^ ā} *ÁÖ [ ¦æÁ¦	Š[•ÁŒ}*^ ^•ÁÖä!^&c[¦^ÁÔ[È
	Ùc^ ā} *ÁŒ àcÁ&æ¦]Á¦	Š[•ÁŒ}*^ ^•ÁÖä!^&c[¦^ÁÔ[È
	ÙVÒlÞÓÒÜŐÁŠ^}æÁ¦	Š[•ÁŒ}*^ ^•ÁÖä!^&c[¦^ÁÔ[È
	Ùæ∙\ā}ÁQ•āå[¦Á& [Á& }¦Á@	Š[•ÁŒ}*^ ^•ÁÖä!^&c[¦^ÁÔ[È
	Ùæ∙\ã}ÁØæ}}^Á¦	Š[•ÁŒ}*^ ^•ÁÖã¦^&c[¦^ÁÔ[È
	Ü[*æcÁŒÁ~˘¦Á¸\¦Á¦	Š[•ÁŒ}*^ ^•ÁÖä¦^&c[¦^ÁÔ[È
%% <b>'`</b> %#&``(	GGCHC	
<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
FJJ€	ÓÒÔÒÜÜŒŀŒÞÕÒŠ	Úæ&å~å&ÅÓ^
%% <b>(</b> `%#&`` <b>(</b>	GGCHC	
<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
FJJ€	ÙŒŠŒÙÁÜQÔŒÜÖU	Úæ&å~å&ÅÓ^
%&)`%#&``(	GGCHC	
<u>MYUf</u>	lgYg	<u>Gc i fWY</u>
FJJ€	ØŠUÜÒÙÁT ŒWÜQÔQU	Úæ&ā~ā&ÅÓ^
%')`%#&``(	GGCHC	
<u>MYUf</u>	<u>I gYg</u>	<u>GcifWY</u>
FJJ€	ÜŒŦQÜÒZÁVÒÜÒÙŒ	Úæ&ā-ā&ÅÓ^
<u>G'GCHC</u>	<u>5J9</u>	
%'(``G`G(	CHC <sup>.</sup> 5J9	
<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
FJÌÎ	PÒÜÜÒÜŒÁRUÙÒ	Úæ&i-i&lÓ^
<u>G'Gchc'(</u>	<u>Gh</u>	
%\$&``G`Go	chc'Gh	
<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
G€F€	ÜŒT UÙÁÞÒ Y ÙÁÙVŒÞÖ	ÒÖÜÁÖå*ācæJÁŒ¦&@āç^

<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
G€F€	ŬŒŦ UÙĺÞÒ Y ÙĺÙVŒÞÖ	ÒÖÜÁÖå*icæ ÁŒ¦&@iç^
<u>G<sup>.</sup>GCHC</u>	<u>`GH</u>	
%\$&``G`GC	CHC <sup>°</sup> GH	
<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
G€€Î	ÜŒŦ UÙĺÞÒ Y ÙVŒÞÖ	₽æã}^∙ÁÁÔ[{]æ}^ÉÁQ}&È
%%\$``G`GC	CHC.CH	
<u>MYUf</u>	<u>lgYg</u>	<u>Gc i fWY</u>
G€€Î	Ô^&āļāæÁÒ	₽æi}^•ÁÂÔ[{]æ}^ÉÁQ}&È
	XŒŠÒÞZWRÒŠŒÓ æ}&æ	₽æå}^∙ÁÁÔ[{]æ}^ÉÁQ}&Ė
	ÓÒŠVÜŒÞÁQ}~æ} ^	₽æã}^•ÁÁÔ[{]æ}^ÊÁQ}&È
FJÏÎ	Ùæc[ÁRæ&∖	Úæ&i~i&ÁV^ ^]@[}^
	Ùæc[ÁRæ&∖	Úæ&å~å&ÅV^ ^]@[}^
	Τ [ ¦^ } [ ÅÔàlæ	Úæ&ā~ā&ÅV^ ^]@[}^
	Ò∙c¦æåæÁÙ[c^¦[	Úæ&i~i&ÁV^ ^]@[}^
FJÍÌ	Zā^} }^lÁÒ { æ} `^lÁÒ	Úæ&i~i&ÁV^ ^]@[}^
	Óæ` { ÅZ^∣åæ	Úæ&ā~ā&ÁV^ ^]@[}^
%%%``G`GC	CHC <sup>-</sup> GH	
<u>MYUf</u>	lgYg	<u>Gc i fWY</u>
FJÏÎ	ÕWŠØÁUQŠÁÙÒÜXQÔÒÁÙVÞÙÁŠ[•ÁŒ}*^ ^•	Úæ&ā-ā&ÁV^ ^]@[}^
%%'``G`GC	CHC <sup>-</sup> GH	
<u>MYUf</u>	lgYg	<u>GcifWY</u>
G€€Î	ÓÒÔÒÜÜŒŒ}*^	₽æã}^∙ÁÁÔ[{]æ}^ÉÁQ}&È
FJÏÎ	Šā:æ{æÅR[¦*^	Úæ&ā~ā&ÁV^ ^]@[}^
FJÍÌ	Ù@ã { æ { ັ ¦æÅV [ { æ	Úæ&ā~ā&ÁV^ ^]@[}^
%%(``G`GC	CHC <sup>-</sup> GH	
<u>MYUf</u>	lgYg	<u>GcifWY</u>
G€€Î	VUÜÜÒÙÁR [^	₽æã}^∙ÁÁÔ[{]æ}^ÉÁQ}&È
	ÙŒÞÔPÒZÞæà[¦	₽æã}^∙ÁÁÔ[{]æ}^ÉÁQ}&È
	Ó^ { æ¦å[	₽æã}^∙ÁÁÔ[{]æ}^ÉÁQ}&È
	ÜUÖÜŧÕWÒZ	₽æi}^•ÁÂÔ[{]æ}^ÉÁQ}&È

FJÍÌ

Õ`à||^}ÁŒ|à&^

₽æã}^•ÁÁÔ[{]æ}^ÊÁQ}&È	GCITWY	
	Pæi}^∙₩Ô[	{ ]æ}^ÊÁQ}&È

# **[**}^ 0[}^

Pæã}^•ÁÅÔ[{]æ}^ÉÅQ}&È
Úæ&ā~ā&ÁV^ ^]@[}^
Úæ&ā~ā&ÁV^ ^]@[}^

### æ}^ÊÁQ}&È æ}^ÊÁQ}&È æ}^ÊÁQ}&È ₽æã}^•ÁÂÔ[{]æ}^ÊÁQ}&È V[!!^•ÁTæ!\*`^!åc^ÁX Úæ&å~ã&ÅV^|^]@[}^ Úæ&ā~ā&ÅV^|^]@[}^

### IJÎÏ€GHËÍ

#### %%, "G'GCHC'GH

<u>MYUf</u>	<u>I gYg</u>
G€€Î	ÙŒVUÁRæ&∖

#### %&'``G`GCHC`GH

<u>MYUf</u>	<u>I gYg</u>	<u>Gc i fWY</u>
G€€Î	ÕŒÜÔŒÁTæ¦åæ	₽æå}^•ÅÅÔ[{]æ}^ÊÅQ}&È
FJÏÎ	U\æ{[c[ÁV•`^[•@ā	Úæ&ã≈ã&ÁV^ ^]@[}^
FJÍÌ	Ó!^} *æ¦c}^¦ÅÔ æ¦æÅ⊤¦∙	Úæ&ã≈ã&ÁV^ ^]@[}^

#### <u>G'Gchc'Gh</u>

%&(``G`Gchc`Gh

<u>IgYg</u>	<u>GcifWY</u>
ÚŒÜÁVÒÞÁÔUÞÙVÜWÔVQUÞÁÔUÁŠŠÔ	ÒÖÜÁÖå*åcæ ÁŒ¦&@åç^
ÚŒÜÁVÒÞÁÔUÞÙVÜWÔVQUÞÁÔUÁŠŠÔ	ÒÖÜÁÖā*iœJÁŒ¦&@iç^
ÚŒÜÁVÒÞÁÔUÞÙVÜWÔVQUÞÁÔUÁŠŠÔ	ÓÖÜÁÖā*iœa ÁŒ¦&@iç^
ÚŒÜÁVÒÞÁÔUÞÙVÜWÔVQUÞÁÔUÁŠŠÔ	ÒÖÜÁÖå*åcæ ÁŒ¦&@åç^
	<u>IgYg</u> ÚŒÜÁVÒÞÁÔUÞÙVÜWÔVQUÞÁÔUÁŠŠÔ ÚŒÜÁVÒÞÁÔUÞÙVÜWÔVQUÞÁÔUÁŠŠÔ ÚŒÜÁVÒÞÁÔUÞÙVÜWÔVQUÞÁÔUÁŠŠÔ

#### <u>G'GCHC'GH</u>

#### %&(``G`GCHC`GH

<u>MYUf</u>	<u>IgYg</u>	<u>Gc i fWY</u>
G€€Î	SŒYŒTUVUÁRæ&\ÁS	Pæi}^•ÅÔ[{
	ÙŒVUÁSæ^	Pæi}^•₩Ô[{
FJÏÎ	S[{`¦[ÁÙ	Úæ&ā-ā&ÁV^ ^] (
FJÍÌ	S[ { ~   [ÁÙ	Úæ&ā~ā&ÁV^ ^](

#### %&) "G'GCHC'GH

<u>MYUf</u>	<u>IgYg</u>
G€€Î	UUU
FJÏÎ	⊤æc•`{[c[Å⊤æ•æ{å
FJÍÌ	Ù^\ā*`&@âÁÒå*æ¦ÁŸ
	Sæ^æ} [ÁŸæ∙` { æ∙æ
	Sæ^æ}[ÁV•~*ā\[

#### %&+``G`GCHC`GH

<u>MYUf</u>	<u>IgYg</u>
G€€Î	Þ[ÁÔ`¦¦^}cÁŠã∙cã}*
FJÍÌ	P¦^} ĭ∖ÁŠāåâæ

#### <u>Gc i fWY</u> Pæi}^•ÅÔ[{]æ}^ÊÁQ}&È

]æ}^ÊÁQ}&È ]æ}^ÊÁQ}&È @[}^ @[}^

#### <u>Gc i fWY</u>

Pæi}^•ÁÔ[{]æ}^ÊÁQ}&È Úæ&å~å&ÁV^|^]@[}^ Úæ&ā~ā&ÁV^|^]@[}^ Úæ&ā~ā&ÁV^|^]@[}^ Úæ&ā~ā&ÁV^|^]@[}^

#### <u>GcifWY</u>

Pæã}^•ÁÅÔ[{]æ}^ÊÁQ}&È Úæ&å~å&ÁV^|^]@[}^

#### %&-``G`GCHC`GH

<u>MYUf</u>	<u>IgYg</u>
G€€Î	ÖQŒZÁR [ •^

#### %'\$``G`GCHC`GH

<u>MYUf</u>	<u>IgYg</u>
G€€Î	ÕŒÜÔQŒÁÒ¦ã\æ
FJÏÎ	Š~}æÁÚæ~ å}æÁÔ¦~:
FJÍÌ	Ü[å¦ā*`^:ÁØ [¦^}&ã[ÁŒ
	Šč}æÁÚæà [

#### %'%"G'GCHC'GH

<u>MYUf</u>	<u>I gYg</u>
G€€Î	Þ[ÁÔ`¦¦^}cÁŠā∙cã}*
FJÍÌ	Þæ*æåÄÖå&∖

#### %'("G'GCHC'GH

<u>MYUf</u>	<u>I gYg</u>	<u>GcifWY</u>
G€€Î	ÚÒÜÒZÁÓ[}i-æ&i[	₽æã}^•ÁÔ[{]æ}^ÉÁQ}&È
	ÜUÖÜQÕWÒZÁR[•^	₽æã}^∙ÁÂÔ[{]æ}^ÊÁQ}&È
FJÏÎ	Œ}å[ÁV[{[\i&@i	Úæ&ā-ā&ÁV^ ^]@[}^
FJÍÌ	Þ` { æcæÅR` ã`∙	Úæ&ā-ā&ÁV^ ^]@[}^

#### <u>G'Gchc'Gh</u>

#### %')``G`Gchc`Gh

<u>MYUf</u>	<u>  I gYg</u>	<u>Gc i fWY</u>
G€FI	ÙŒÞÔPÒZÁØÜÒIÕPVÁÔUÜÚ	ÒÖÜÁÖã*ãcæ
	ÖQÔPÙŒÞÁŒÞÔ	ÒÖÜÁÖã*ãcæ
	ÙŒÞÔPÒZÁØÜÒIÕPVÁÔUÜÚ	ÒÖÜÁÖã*ãcæ
	ÖQÔPÙŒÞÁQÞÔ	ÒÖÜÁÖã*ãcæ
G€F€	ÙŒÞÔPÒZÁØÜÒIÕPVÁÔUÜÚ	ÒÖÜÁÖã*ãcæ
	ÖQÔPÙŒÞÁŒÞÔ	ÒÖÜÁÖã*ãcæ
	ÖQÔPÙŒÞÁQÞÔ	ÒÖÜÁÖã*ãcæ
	ÙŒÞÔPÒZÁØÜÒIÕPVÁÔUÜÚ	ÒÖÜÁÖã*ãcæ

#### <u>G'GCHC'GH</u>

#### %') "G'GCHC'GH

<u>MYUf</u>	<u>I gYg</u>	<u>GcifWY</u>
G€€Î	ÙŒÞÔPÒZĺÞ[¦à^¦¢[	Pæi}^∙₩Ô[{]æ}^ĖAQ}&Ė

# <u>GcifWY</u>

Pæi}^•ÅÔ[{]æ}^ÊÁQ}&È

#### <u>Gc i fWY</u>

Pæã}^•ÁÅÔ[{]æ}^ÊÁQ}&È Úæ&å~å&ÁV^|^]@[}^ Úæ&ā~ā&ÁV^|^]@[}^ Úæ&ā~ā&ÁV^|^]@[}^

#### <u>Gc i fWY</u>

Pæi}^•ÅÔ[{]æ}^ÊÁQ}&È Úæ&ā~ā&ÁV^|^]@[}^

ÒÖÜÁÖã*ãcæ ÁŒ¦&@ãç^
ÒÖÜÁÖã*ācæ ÁŒ¦&@āç^
ÒÖÜÁÖã*ācæ ÁŒ¦&@āç^
ÒÖÜÁÖã*ācæ ÁŒ¦&@āç^
ÒÖÜÁÖã*ācæ ÁŒ¦&@āç^
ÒÖÜÁÖã*ācæ ÁŒ¦&@āç^
ÒÖÜÁÖã*ācæ ÁŒ¦&@āç^

g

FJÍÌ Xæ|æå^:ÁR[•^

#### %'\*``G`GCHC`GH

<u>MYUf</u>	<u>lgYg</u>
G€€Î	XÒŠŒÙÛWÒZŠ
	ÖQUÙÖŒÖUÁR[•^ÁŠ˘ã•
	Tæl*ælicæ
FJÏÎ	Œà^ÁŸ[•@ã\ã
FJÍÌ	T ĭ¦æcæÁŸ

%'+"G'GCHC'GH

<u>MYUf</u>	<u>IgYg</u>
G€€Î	Þ[ÅÔ`¦¦^}cÅŠã•cã}*
FJÍÌ	Pæ∙@ã{ [c[ÁÙæàč¦[

#### %'-"G'GCHC'GH

<u>MYUf</u>	<u>lgYg</u>
FJÍÌ	Ù@ã¦[cæÁSæ}ã&@ã¦[

#### %(\$``G`GCHC`GH

<u>MYUf</u>	<u>IgYg</u>
G€€Î	ØÒÜÜÒŠŠÁR^~~
	ÔŒÜ⊤UÞŒSæ&@å¦}^
FJÏÎ	Ÿ[}^^æ{æÅS
FJÍÌ	Ÿ[}^^æ{æÅV

#### %(%``G`GCHC`GH

<u>MYUf</u>	<u>IgYg</u>
G€€Î	æÁXÒŠUZÁÜæ { ā { [
FJÏÎ	T^}å[:æÅŠč]^
FJÍÌ	Ùæ∙\ã}ÁQ

#### %()<sup>..</sup>G<sup>.</sup>GCHC<sup>.</sup>GH

# <u>MYUf IgYg</u>

G€€Î TŒÜVℚÞÒZÒ

#### %+%<sup>··</sup>G<sup>·</sup>GCHC<sup>·</sup>GH

 MYUf
 IgYg

 FJΪÎ
 Ø[¦&@ckÔæ¦|kÒ

<u>Gc i fWY</u>

Úæ&ā~ā&ÁV^|^]@[}^

#### <u>Gc i fWY</u>

 Pæi}^•ÅÅÔ[{]æ}^ÉÅQ}&Ë

 Pæi}^•ÅÅÔ[{]æ}^ÉÅQ}&Ë

 Pæi}^•ÅÅÔ[{]æ}^ÉÅQ}&Ë

 Úæ&å-å&Å∨^|^]@[}^

 Úæ&å-å&Å∨^|^]@[}^

#### <u>Gc i fWY</u>

Pæi}^•ÁÁÔ[{]æ}<sup>^</sup>ÉÁQ}&È Úæ&i≈i&ÁV^|^]@[}^

### <u>Gc i fWY</u>

Úæ&ā~ā&ÁV^|^]@[}^

#### <u>Gc i fWY</u>

Pæi}^•ÅÅÔ[ { ]æ} <sup>^</sup>ÉÅQ}&È
Pæi}^•ÅÅÔ[ { ]æ} <sup>^</sup>ÉÅQ}&È
Úæ&i-i&Å/O[ { ]æ} <sup>^</sup>ÉÅQ}&È
Úæ&i-i&Å//^]@[ }^

#### <u>Gc i fWY</u>

₽æå}^•ÅÅÔ[{]æ}^ĖÅQ}&Ė Úæ&ã-ã&ÅV^|^]@[}^ Úæ&ã-ã&ÁV^|^]@[}^

# <u>GcifWY</u>

Pæã}^•ÁÁÔ[{]æ}^ÊÁQ}&È

#### <u>Gc i fWY</u> Úæ&i∻i&ÁV^|^]@[}^

#### GCHC'GH'B

#### %\$'"GCHC'GH'B <u>MYUf</u> <u>I g Y g</u> FJÍF ÞÁÙ[c[ÁÜ^&æàæ¦^}ÁRæ•ÁÒÁ¦ ÞÁÙ[c[ÁÕ˘^^¦ÁRæ&\Á¦ %\$)<sup>...</sup>GCHC<sup>.</sup>GH<sup>.</sup>B <u>MYUf</u> <u>IgYg</u> FJÍF ÞÁÙ[c[ÁÔ[@^}ÁÙæ{Å! %\$+"GCHC'GH'B <u>MYUf</u> <u>I q Y q</u> FJÍF ÞÁÙ [ c [ ÁÔ [ @^ } ÁŠã||ãæ } Á T ¦•Á¦ %\$-"GCHC'GH'B <u>MYUf</u> <u>I q Y q</u> FJÍF ÞÁÙ[c[ÁÕ¦[••à^¦\*ÁÙãå}^^Á¦ %%\$"GCHC'GH'B <u>MYUf</u> <u>IgYg</u> FJÍF ÞÁÙ[c[ÁÙ[c[ÁÔ[}•cÁÔ[¦] ÞÁÙ[c[ÁÙ[c[ÁÔ[}•cÁÔ[¦] ÞÁÙ[c[Á⊤æ¦\ÁÔ[}•cÁÔ[ $\dot{P}$ ÁÙ [c[ÁQ} å $\dot{O}$ = clāæļÁÜ [[~ā} \* ÁÔ [ %%) "GCHC GH B <u>MYUf</u> <u>IgYg</u> FJÍF ÞÁÙ[c[ÁÖ^c¦[ácÁŒ]c∙ Ù^¦|ã}ÁØæ^Á¦

Ùæ|c: { æ}ÁÙælæ@Ál Ù@æi\^}ÁÙ[]@i^Á¦

#### %%\*"GCHC'GH'B

#### <u>MYUf</u> lgYg

FJÍF  $\dot{P}$ ÁÙ [c[Á Y æ|å [  $\dot{A}$ Vā|]ā^Á

#### %%, "GCHC'GH'B

<u>IgYg</u> <u>MYUf</u> FJÍF ÞÁÙ[c[ÁÜ`à^}•c^ā}ÁT[¦¦ā•Á¦ ÞÁÙ[c[ÁÓ[¦^c:ÁT[¦¦ā•Á]

#### <u>GcifWY</u>

Úæ&ā~ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[È Úæ&ā~ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[Ė

<u>GcifWY</u> Úæ&ā~ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[Ė

<u>GcifWY</u> Úæ&ā~ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[Ė

<u>GcifWY</u> Úæ&ā~ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[Ė

# <u>GcifWY</u>

Úæ&ā~ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[Ė Úæ&ā-ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[Ė Úæ&ā~ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[Ė Úæ&ā~à&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[È

### <u>GcifWY</u>

Úæ&ā-ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[È Úæ&ā~ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[Ė Úæ&ā~ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[È Úæ&ā~ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[Ė

#### <u>GcifWY</u>

Úæ&ā~ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[È

### <u>GcifWY</u>

Úæ&ā~ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[Ė Úæ&ā~ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[Ė

#### %&%<sup>...</sup>GCHC<sup>.</sup>GH<sup>.</sup>B

<u>MYUf</u>	<u>I gYg</u>
FJÍF	ÞÁÙ[c[ÁØ^å^¦ÁÚæč Á¦
	ÞÁÙ[c[ÁÕ[å}&\ÁP榦^ÁŠÁ¦
%&&``GCHC	GH B
<u>MYUf</u>	<u>IgYg</u>
FJÍF	ÞÁÙ[c[ÁÙ&@¸æ¦c:ÁÙã{[}ÁŠÁÜæààāÁ¦
%&(``GCHC	GH'B
<u>MYUf</u>	<u>I gYg</u>
FJÍF	ÞÁÙ[c[Áܢå[ ]@ÁŒ}}æÁŦ¦•Á¦
%&)¨GCHC	GH'B
<u>MYUf</u>	<u>I gYg</u>
FJÍF	ÞÁÙ[c[ÁS¦æ•}[¸ÁRæ&[àÁ¦
%&+ <sup>`'</sup> GCHC	GH'B
<u>MYUf</u>	<u>I gYg</u>
FJÍF	ÞÁÙ[c[ÁÜ`à^}ÁÒçæÁT¦•Á¦
	ÞÁÙ[c[ÁÕæ[}æÁÒ [ǎ•æ
%&-``GCHC	GH'B
<u>MYUf</u>	<u>IgYg</u>
FJÍF	ÞÁÙ[c[ÁÓæ゛{ÁZ^ åæÁ¦
%'% <sup>``</sup> GCHC	GH'B
<u>MYUf</u>	<u>I gYg</u>
FJÍF	ÞÁÙ[c[ÁÞ^, {æ}ÁTÁT¦•Á¦
%'&``GCHC	GH'B
<u>MYUf</u>	<u>IgYg</u>
FJÍF	ÞÁÙ[c[ÁPācc^ {æ}ÁTæ¢Á¦
	ÞÁÙ[c[ÁPācc^ {æ}ÁR[•ÁTÖ
%'(``GCHC	GH B
<u>MYUf</u>	<u>I gYg</u>
FJÍF	ÞÁÙ[c[ÁÓæ¦[}ÁÓ^æc¦å&^Á¦

ÞÁÙ[c[ÁŠ[}å[}ÁÙiå}^^Á¦

#### <u>Gc i fWY</u>

Úæ&&-&&\V^|^]@[}^\B\V^|^\*!æ]@\Ô[È Úæ&&-&&\V^|^]@[}^\B\V^|^\*!æ]@\Ô[È

<u>GcifWY</u> Úæ&ã-ã&ÁV^|^]@[}^ÅBÅV^|^\*¦æ]@ÅÔ[Ė

<u>Gc i fWY</u> Úæ&ã-3&ÅV^|^]@[}^ÅBÅV^|^\*¦æ]@ÅÔ[Ė

<u>GcifWY</u> Úæ&ě-å&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÅÔ[Ė

<u>Gc i fWY</u> Úæ&&&&ÅV^|^]@[}^ÅBÅV^|^\*¦æ]@ÅÔ[Ė Úæ&&&&ÅV^|^]@[}^ÅBÅV^|^\*¦æ]@ÅÔ[Ė

<u>GcifWY</u> Úæ&&∻&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[Ė

<u>Gc i fWY</u> Úæ&≟&ÅV^|^]@[}^ÅBÅV^|^\*¦æ]@ÅÔ[Ė

<u>GcifWY</u> Úæ&å-å&ÅV^|^]@[}^ÅBÅV^|^\*¦æ]@ÅÔ[Ė Úæ&å-å&ÅV^|^]@[}^ÅBÅV^|^\*¦æ]@ÅÔ[Ė

#### <u>Gc i fWY</u>

Úæ&å-å&ÅV^|^]@[}^ÅBÅV^|^\*¦æ]@ÅÔ[È Úæ&å-å&ÅV^|^]@[}^ÅBÅV^|^\*¦æ]@ÅÔ[È

#### IJÎÏ€GHËÍ

#### %'+"GCHC'GH'B

#### MYUf IqYq

FJÍF ÞÁÙ[c[ÁPā  ^¦ÁTæ	¢Á
-----------------------	----

### %', "GCHC'GH'B

<u>MYUf</u>

FJÍF

FJÍF	ÞÁÙ	[¢[ÁF	Pá  ^¦ÁT	æ¢Á

FJIF	ÞÁÙ[c[ÁPā  ^¦ÁTæ¢Å¦

FJIF	ÞAU[c[APā  ^¦ATæ¢/

FJIF	ÞÁÚ[c[ÁPá  ^¦ÁTæ¢Å

Õ[|å { å}c:ÁP^}!^Á!

Œ[]^!cÁTæ!^ÁT¦•Á!

ÞÁÙ[c[ÁP^|^}ÁŒ]c•

Sæ]|æ}ÅTæ¦\*æ¦^cŦ T^@|i} \*ÁQåæÁÜÁT¦•Á¦

Š^çã}ÁQåæÁ¦

Ø^i} \ÁŒ|à^lcÁTÁl

Ó|[[{ { ÁŠä||ãæ}} ÁT |• Á}

Y [@|ÁŠæ , ¦^}&^Á¦ Yá^}^!ÁR^æ}ÁT:•Á!

Y ^i } • c^i } ÁÜÁT ! • Á!

Þi¢[}ÁÖæç^Ál

ÞÁÙ[c[ÁÖ¦~ { [ }å•ÁÓ[àÁ¦

ÞÁÙ [c[ÁÙ&@~|c:ÁÒ•c@^¦ÁT¦•Á¦

Tã}•c^¦ÁQ¦çã}\*

FJIF	ÞÁÙ[c[ÁPá  ^¦ÁTæ

<u>IgYg</u>

### Gc i fWY

:=B8=B;G

Úæ&ā~ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[Ė

### <u>GcifWY</u>

### Úæ&ā-ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[È Úæ&ā-ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[Ė Úæ&ā-ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[È Úæ&ā~ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[Ė Úæ&ā~ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[Ė Úæ&ā-ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[Ė Úæ&ā-ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[Ė Úæ&ā~ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[È Úæ&ā~ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[Ė Úæ&ā~ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[Ė Úæ&ā~ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[Ė Úæ&ā-ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[Ė Úæ&ā~ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[È Úæ&ā~ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[Ė Úæ&ā~ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[Ė

#### %(&"GCHC'GH'B

#### <u>MYUf</u> <u>I q Y q</u>

FJÍF ÞÁÙ[c[ÁÜā~\ā}ÁÜ[•^|^}Á!

#### %(("GCHC'GH'B

<u>MYUf</u>	<u>I gYg</u>
FJÍF	ÞÁÙ[c[ÁÜ[•^}c@æ ÁÒ~*^}^ÁT¦•

#### %(+"GCHC'GH'B

#### <u>MYUf</u> lgYg

FJÍF ÞÁÙ[c[ÁŒ\*æc@æÁŒ]c• S|^i}ÁŠ^[ }æ!åÁ! Tæcc^•ÁY { Á! Ü[•^ÁÙælæ@ÁT¦•Ál Ræ&[à•[}ÁÜ[•^Á ΍^¦^ÁÓ^••å^ÁT ¦•Á¦

Úæ&ā~ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[Ė

## <u>GcifWY</u>

Gc i fWY

Úæ&ā-ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[Ė

### GcifWY

Úæ&ā~ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[Ė Úæ&ā~ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[Ė Úæ&ā-ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[Ė Úæ&ā~ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[È Úæ&ā~ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[Ė Úæ&ā~ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[Ė

#### %)\$"GCHC'GH'B

#### <u>IgYq</u> <u>MYUf</u> FJÍF ÞÁÙ[c[ÁÜ[∙^Á₽[c^|

#### GCHC'GH'G

# <u>MYUf</u> FJÍF

<u>IgYg</u>

<u>IgYg</u>

<u>I g Y g</u>

<u>IgYg</u>

<u>I q Y q</u>

<u>IgYg</u>

ÙÁÙ[c[ÁÙæc[ÁRæ&\Á¦

ÙÁÙ[c[ÁS[{`|[ÁÙÁ|

ÙÁÙ [ c [ ÁÙ^ \ǎ\* `&@āÁŸ`cæ \æÁ¦

ÙÁÙ [ c [ ÁRā { ^ } ^ : ÁÒ•c@^¦Á!

#### %%**\$**``G(

#### %%'''GCHC'GH'G

%%(``GCHC`GH`G

%%, "GCHC'GH'G

%&(``GCHC`GH`G

%&) "GCHC'GH'G

%&+``GCHC`GH`G

<u>MYUf</u>

FJÍF

<u>MYUf</u>

FJÍF

<u>MYUf</u>

FJÍF

<u>MYUf</u>

FJÍF

<u>MYUf</u>

FJÍF

<u>MYUf</u>

FJÍF

CHC'GH'G		
	<u>lgYg</u>	
	Zā { { ^¦ { æ}ÅYÅT¦•Ŧ	
	S¦æ-cÁŒ}}æÁ¦	
	Ü[•^}ÁÙìå}^^	
	Ùc^ā}à^¦*ÁÙ[]@ā^Á¦	
	Ù@^¦ {	
	Y æ¦ } ^ ¦ÁØæ } }å^Á¦	
	U∙æ¸æÁTÁŸ	
	ÙÁÙ[c[ÁPæi∶àæ}åÁÜ[∙^Á¦	
	ÚÁÙ F¢F	

ÙÁÙ [c[ÁÙ@i { æ { ` ¦æÁV [ { æÁ¦

 $\dot{U}\dot{A}\dot{U}$  [ c [  $\dot{A}X$  æ|^ } & iæ $\dot{A}T$  æ' \* ` ^ lic^

# <u>GcifWY</u>

Úæ&ā~ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[Ė

#### <u>GcifWY</u>

Úæ&å~å&ÅV^|^]@[}^ÅBÅV^|^\*¦æ]@ÅÔ[Ė Úæ&ā~ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[Ė Úæ&ā-ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[È Úæ&ā~ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[Ė Úæ&ā~ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[Ė Úæ&ā-ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[È Úæ&ā-ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[È Úæ&ā~ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[Ė Úæ&ā~ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[Ė

Úæ&ā~ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[Ė <u>GcifWY</u> Úæ&ā-ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[È

# GcifWY

<u>GcifWY</u>

<u>GcifWY</u>

Úæ&ā~ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[Ė

Úæ&ā-ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[È

<u>GcifWY</u>

Úæ&ā-ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[È

<u>GcifWY</u> Úæ&ā~ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[Ė

#### IJÎÏ€GHËÍ

#### %&-``GCHC'GH'G

<u>MYUf</u>	<u>IgYg</u>
FJÍF	ÙÁÙ[c[ÁÜæ∙\å}ÁŠ^[}æ¦åÁ⊤¦∙Á¦

#### %'\$``GCHC`GH`G

 MYUf
 JgYg

 FJÍF
 ÙÁÙ[c[ÁÜ[å¦å\*`^:ÅØ|[¦^}&åi[ÅŒÁ!

 ÙÁÙ[c[ÁŠ`}æÅÚæà|[Á!

%'%"GCHC'GH'G

<u>MYUf IgYg</u> FJÍF ÙÀÙ[c[ÅÞæ\*æåÅSæ:˘\[Å]

#### %'("GCHC'GH'G

 MYUf
 IgYg

 FJÍF
 ÙÁÙ[c[ÁÞæ\æš&@ả́Øšäá¦

 ÙÁÙ[c[ÁU\šā[ÁPæ]bäá]

#### %')<sup>...</sup>GCHC<sup>..</sup>GH<sup>..</sup>G

<u>MYUf</u>	<u>I gYg</u>
FJÍF	ÙÁÙ[c[ÁXæ æå^:ÁR[●^Á¦

#### %'\*"GCHC'GH'G

<u>MYUf</u> <u>IgYg</u> FJÍF ÙÀÙ[c[ÅSæ,æ\*`&@ÄTå^^Ŧ

#### %'+``GCHC`GH`G

<u>MYUf</u> <u>IgYg</u> FJÍF ÙÁÙ[c[ÁØ|^c&@^¦ÁV^åÁY

#### %'-``GCHC`GH`G

 MYUf
 IgYg

 FJÍF
 ÚAÙ [c[ÁPæ||ã,ã||ÁÜ^ { æÁŠÁ¦

#### %(\$``GCHC`GH`G

 MYUf
 IgYg

 FJÍF
 ÙÀÙ[c[ÅÔ@à]¦[}ÅŒ{^|àæÅŠÅ}

#### %(%``GCHC`GH`G

<u>MYUf</u> <u>IgYg</u> FJÍF ÙÁÙ[c[ÁÙæ∙∖å}ÁQÁ¦ <u>GcifWY</u> Úæ&∻&ÅV^|^]@[}^ÅBÅV^|^\*¦æ]@ÅÔ[Ė

# <u>Gc i fWY</u>

Úæ&å-å&ÅV^|^]@[}^ÅBÅV^|^\*!æ]@ÅÔ[È Úæ&å-å&ÅV^|^]@[}^ÅBÅV^|^\*!æ]@ÅÔ[È

<u>Gc i fWY</u> Úæ&∻&ÅV^|^]@[}^ÅBÅV^|^\*¦æ]@ÅÔ[Ė

#### <u>Gc i fWY</u>

Úæ&&&&ÅV^|^]@[}^\BÅV^|^\*!æ]@\AO[Ė Úæ&&&&&V^|^]@[}^\BAV^|^\*!æ]@\AO[Ė

### <u>Gc i fWY</u> Úæ&≟&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[Ė

<u>GcifWY</u> Úæ&ảá&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[È

### <u>Gc i fWY</u> Úæ&≟¾ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[Ė

<u>GcifWY</u>

Úæ&ā-ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[Ė

<u>GcifWY</u> Úæ&∻å&ÅV^|^]@[}^ÅBÅV^|^\*¦æ]@ÅÔ[È

#### <u>GcifWY</u> Úæ&ãã&↓V^|^]@[}^\B↓V^|^\*¦æ]@↓Ô[Ė

#### %()<sup>...</sup>GCHC<sup>..</sup>GH<sup>..</sup>G

<u>MYUf</u>	<u>I gYg</u>
FJÍF	ÙÁÙ[c[ÁÛ`^•æåæÁTæ`¦å&^ÁÕÁ¦
%)\$``GCHC	GH'G
<u>MYUf</u>	<u>I gYg</u>
FJÍF	ÙÁÙ[c[Á⊤æc[∙iæ}ÁÙ^c¦æ\Á¦
%)( <sup></sup> GCHC	GH'G
<u>MYUf</u>	<u>I gYg</u>
FJÍF	ÙÁÙ[c[ÁX[ç&@ä\ÁTæ¦^Á¦
%)*`'GCHC	GH'G
<u>MYUf</u>	<u>I gYg</u>
FJÍF	ÙÁÙ [c[
	Z`•{ ^¦ÁÙæ {  Á¦
	Y ^ā}^¦ÁÓ^}Á!

#### <u>Gc i fWY</u>

Úæ&ā~ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[È

#### <u>Gc i fWY</u>

Úæ&ā~ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[È

#### <u>Gc i fWY</u>

Úæ&ā~ā&ÁV^|^]@[}^ÁBÁV^|^\*¦æ]@ÁÔ[È

#### <u>Gc i fWY</u>

Úæ&&-&&&V^|^]@[}^&B&V^|^\*!æ]@&Ô[Ė Úæ&&-&&&V^|^]@[}^&B&V^|^\*!æ]@&Ô[Ė Úæ&&-&&&V^|^]@[}^&B&V^|^\*!æ]@&Ô[Ė Úæ&&-&&&V^|^]@[}^&B&V^|^\*!æ]@&Ô[Ė Úæ&&-&&&V^|^]@[}^&B&V^|^\*!æ]@&Ô[Ė

IJÎÏ€GHËÍ

#### H5F; 9H DFCD9FHM. 588F9GG BCH = 89BH= : = 98 = B F9G95F7 < GC I F79

5XXfYqq FYqYUfW\Y
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#### 5XXfYgg'Bch'=XYbh]Z]YX']b'FYgYUfW\'Gc i fWY

FFJÁÙ [ čc@ÁÙ [ c [ ÁÙc¦^^c

#### 58>C=B=B; DFCD9FHM. 588F9GG9GBCH=89BH=:=98=BF9G95F7<GCIF79

V@^Á~[||[ ,ā}\*ÁŒåb[ā}ā}\*ÁÚ![]^!c^Áæåå!^••^•Á ,^!^Á!^•^æ!&@^åÁ~[!Ác@ã•Á!^][!cÊÁæ}åÁc@^Áæåå!^••^•Á , ^!^Á}[cÁ ãå^}cā-ã^åÅá}Á!^•^æ!&@Á•[`!&^È

<u>5XXfYgg`FYgYUfW\YX</u>	5XXfYgg`Bch`=XYbh]Z]YX`]b`FYgYUfW\`GcifWY
F€€ÅÞÁÙUVU	G€FIÈÅG€F€ÈÅG€€ÎÈÅG€€IÈÅG€€HĖÅG€€FĖÅG€€EÅFJJJÈÅFJJĨĖÅFJJĖÅFJJGĖÅFJJFÅFJJ€ÈÅ FJÌÍĖÅFJÌFÅFJÌ€ÅFJÏÎĖÅFJÏİĖÅFJÏĞÅFJĬÏËÅFJĬĨËÅFJĨËÅFJĨJĖÅFJĴIÈÅFJĨÈÅFJĨÈÅFJĨ FJÎHĖÅFJÎGĖÅFJĨFÅFJĨ€ÅFJĬÌĖÅFJĬĨĖÅFJĨĨĖÅFJĨĨĖÅFJĨIĖÅFJĨIĖÅFJĨĖÅFJĨĖÅFJI FJIÌĖÅFJIĨĖÅFJIĨĖÅFJIĨĖÅFJIĨĖÅFJĨĨĖÅFJĨĨĖÅFJĨĨĖÅFJIĨĖÅFJHÌĖÅFJHĨĖÅFJHIĖÅ FJIFĖÅFJH€ÅFJIĨĖÅFJIĨĖÅFJĨĨĖÅFJĨĨĖÅFJĨ
F€GÅÙÅÙUVUÅÙV	G€FIÈIG€F€ÈIG€€IÈIG€€HÈIG€€FÈIG€€€ÈIFJJJÈIFJJÎÈIFJJÎÈIFJJEÈIFJJFÈIFJJ€ÈIFJ]€ÈIFJÌÊ À FJÌİÉIFJÌFÈIFJÌ€ÈIFJÏÎÈIFJÏÎÈIFJÏËÈIFJÏFÈIFJÎEÈIFJÎEÈIFJÎEÈIFJÎÊIFJÎÊ FJÎHÈIFJÎGÈIFJÎFÈIFJ΀ÈIFJĬÎÈIFJIÎÈIFJIÎÊIFJÎÎÈIFJÎÊIE FJIÌÈIFJIÎÈIFJIÎÈIFJIÎÈIFJI]ÊIFJIÎÈIFJIÊ FJHHÈIFJHGÈIFJHFÈIFJGEÈIFJGJÈIFJGÌÈIFJGÎÈIFJGÎÈIFJGIÊIFJGHÈIFJGEÈIFJGEÈ
F€GÅÙÁÙ[c[ÁÙc	G€FIÈIGE€ÎÈIGE€IÈIGE€HÈIGE€FÈIGE€EÈIFJJÈIFJJÎÈIFJJÎÈIFJJÊİFJJFÈIFJJĒÈIFJJĒÈIFJ] FJÌİÊIFJÌFÈIFJÌ€ÈIFJÏÊÈIFJÏÎÈIFJÏËÈIFJÏËÈIFJÏEÈIFJÎEÈIFJÎÈIFJÎÊIFJÎÊ FJÎHÊIFJÎGÊIFJÎFÊIFJ΀ÈIFJÎÎÈIFJIÎÊIFJÎÎÊIFJÎÎÊIFJÎÊIEJ FJIÌÊIFJIÎÊIFJIÎÊIFJIÎÊIFJIÎÊIFJIÎÊIFJIÎÊIFJIÎÊIFJJÎÊ FJHHÊIFJHGÊIFJHFÊIFJH€ÊIFJGJÊIFJGÎÊIFJGÎÊIFJGÎÊIFJGIÊIFJGIÊIFJGHÊIFJGÊÎFJG
F€GÅÙÅÙ [c[ÅÙc	G€FIÈ\GE€ÎÈ\GE€IÈ\GE€HÈ\GE€FÈ\GE€EÈ\FJJJÈ\FJJÎÈ\FJJÎÈ\FJJË\FJJË\FJJË\FJJĒÈ\FJJĒÈ\FJ] FJÌİÈ\FJÌFÈ\FJÌ€İ\FJÌÊ FJÎHÈ\FJÎÊ FJÎHÊ\FJÎÊ FJIÌÈ\FJIÎÊ FJIÌÈ\FJIÎÊ FJHHÊ\FJHGÈ\FJHÊ\FJIÎÊ\FJI]Ê\FJGÎÊ\FJGÎÊ\FJGÎÊ\FJGÎÊ\FJGIÊ\FJGHÊ\FJGË FJHHÊ\FJHGÊ\FJHFÊ\FJH€È\FJG]Ê\FJGÎÊ\FJGÎÊ\FJGÎÊ\FJGIÊ\FJGHÊ\FJGHÊ\FJGË FJHHÊ\FJHGÊ\FJHFÊ\FJH€È\FJG]Ê\FJGÎÊ\FJGÎÊ\FJGÎÊ\FJGIÊ\FJGHÊ\FJGHÊ\FJGÊ
F€HÁFŀGÁÞÁÙUVU	G€FIÊ&G€FÊÊ&GÊ€ÊÊ&GE€IÊ&G€€HÊ&G€€FÊ&GE€EÊ#JJJÊ#FJJÎÊ#FJJÊÊ#JJÊÊ#JJFÊ#JJÊ FJÎÎÊ&FJÎÊÊ#JÎÊ FJÎHÊ#FJÎGÊ#FJÎÊÊ#FJÎÊÊ#FJÎÎÊ FJÎHÊ#FJÎGÊ#FJÎFÊ#FJÎÊÊ#FJÎÎÊ FJIÎÊ#FJIÎÊ#FJIÎÊ FJHHÊ#FJHGÊ#FJHÊÊ#FJGJÊ#FJGÎÊ#FJGÎÊ#FJGÎÊ#FJGÎÊ#FJGIÊ#FJGHÊ#FJGÊ FJHHÊ#FJHGÊ#FJHFÊ#FJH€Ê#FJGJÊ#FJGÎÊ#FJGÎÊ#FJGÎÊ#FJGIÊ#FJGHÊ#FJGÊ#
F€HÅÞÁÙUVUÁÙV	G€FIÈ&G€F€È&G€€ÎÈ&G€€IÈ&G€€HÈ&G€€EÈ&GE€E&EÈ&FJJJÈ&FJJÎÈ&FJJĜÈ&FJJGÈ&FJJEÈ&FJJ€È FJÌÎÈ&FJÌÉ&FJÌEÈ&FJÌ€È&FJĬÎÈ&FJĬÎÈ&FJĬGÈ&FJĬEÈ&FJĬ€È&FJÌ€È&FJÌÊ FJÎIÈ&FJÎHÊ&FJÎGÊ&FJÎE FJIÌÈ&FJIÎÊ FJHHÊ&FJHÎÊ&FJHÊ&FJHÊ&FJGJÊ&FJGÌÊ&FJGÎÊ&FJGÎÊ FJHHÊ&FJHGÊ&FJHFÊ&FJGE&FJGÎÊ&FJGÎÊ&FJGÎÊ&FJGIÊ&FJGIÊ&FJGHÊ&FJGFÊ FJHHÊ&FJHGÊ&FJHFÊ&FJH€Ê&FJGJÊ&FJGÌÊ&FJGÎÊ
F€HÁÙUVUÁÙVÁÞ	G€FIÊÅG€F€ÊÅG€€ÎÊÅG€€IÊÅG€€HÊÅG€€FÊÅG€€EÅFJJÊÅFJJÎÊÅFJJÎÊÅFJJÊÅFJJÊÅFJJÊÅFJJÊÅFJ

<u>5XXfYgg`FYgYUfW\YX</u>	5XXfYgg`Bch`=XYbh]Z]YX`]b`FYgYUfW\`GcifWY
F€ÍÅÞÅÙUVU	G€FIÈAG€F€ÈAG€€ÎÈAG€€IÈAG€€HÈAG€€FÈAG€€EÀFJJJÈAFJJÎÈAFJJÎÈAFJJGÈAFJJFÈAFJÌÉ À FJÌ€ÈAFJÏÎÈAFJÏÎÈAFJÏGÈAFJÏFÈAFJÏGÈAFJÎJÈAFJÎÎÈAFJÎÎÈAFJÎÎÈAFJÎÎÈAFJÎ FAJÎÊÀFJÎÎÊAFJÎÎÈAFJÎÎÈAFJÎÎÈAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÊAFJÎÊAFJIÎÊA FJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJÎÊA FJGÎÊAFJGÎÊAFJGÎÊAFJGÊAFJGFÊAFJG€
F€ÍÅÙUVUÅÙVÅÞ	G€FIÊAG€F€ÊAG€€ÎÊAG€€IÊAG€€HÊAG€€FÊAG€€ÊAFJJJÊAFJJÎÊAFJJÎÊAFJJGÊAFJJFÊAFJJEÊ FJÌÎÊAFJÌIÊAFJÌFÊAFJÌÊAFJÏÎÊAFJÏÎÊAFJÏGÊAFJÏÊAFJÎÊAFJÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊ FJÎIÊAFJÎHÊAFJÎGÊAFJÎFÊAFJ΀ÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎ FJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJAÎÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎÊ FJHHÊAFJHGÊAFJHFÊAFJH€ÊAFJGJÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGIÊAFJGIÊAFJGÊÊAFJG
F€ĨÁÙU∨UÁÙVÁÞ	G€FIÊ&G€FÊÊ&GÊ€ÊÊ&GE€IÊ&G€€EÊ&GE€EÊ&GE€Ê&FÛJJÊ&FJJÎÊ&FJJÊÊFJJÊÊ#JJFÊ#JJÊ FJÎÎÊ&FJÎÊÊ#JÎFÊ#JÎÊ FJÎIÊ#FJÎÊ FJÎIÊ#FJÎÊ FJÎIÊ#FJÎÊ FJIÎÊ#FJÎÊ FJIÎÊ FJHHÊ#FJHÊÊ FJHHÊ#FJHÊÊFJHÊ FJHHÊ#FJHGÊ#FJHÊ FJHHÊ#FJHGÊ FJHHÊ#FJHGÊ FJHHÊ
F€ÌÅÞÁÙU∨U	G€FIÈ&G€F€È&G€€ÎÈ&G€€IÈ&G€€FÈ&GE€EÊ&GE€EÈ&FJJJÈ&FJJÎÈ&FJJÎÈ&FJJGÈ&FJJFÈ&FJÌÊ À FJÌ€È&FJĨÎÈ&FJĨÎÈ&FJĨGÈ&FJĨ€È&FJĨĴÈ&FJÎÎÈ&FJÎÎÈ&FJÎIÈ&FJÎIÈ FJĨĨÈ&FJĨÎÊ&FJĨÎÊ FJIĞÊ&FJIÊ KAFJIÎÊ FJGÎÊ&FJGÎÊ&FJGÎÊ KAFJGÎÊ FJGÎÊ FJGÎÊ KAFJGÊ KAFJGÊ KAFJGÊ KAFJÎÎ KAFJÎÊ KAFJÎÊ KAFJÎÊ KAFJÎÊ KAFJÎÊ KAFJÎÎÊ KAFJÎÊ KAFJÎÊ KAFJÎÊ KAFJÎÎÊ KAFJÎÎÊ KAFJÎÎÊ KAFJÎÎÊ KAFJÎÎÊ KAFJÎÊ KAFJÎÎÊ KAFJÎÎÊ KAFJÎÎÊ KAFJÎÎÊ KAFJÎÎÎ KAFJÎÎÊ KAFJÎÎÎ KAFJÎÎÊ KAFJÎÎÊ KAFJÎÎÊ KAFJÎÎÊ KAFJÎÎÎ KAFJÎÎÎ KAFJÎÎ KAFJÎÎ KAFJÎÎ KAFJÎÎ KAFJÎÎ KAFJÎÎÎ KAFJÎÎÎ KAFJÎÎ K KAFJÎÎ KAFJÎ KAFJÎ KAFJÎÎ KAFJÎÎ KAFJÎÎ KAFJÎÎ KAFJÎÎ KAFJÎÎ KAFJÎÎ KAFJÎÎ KAFJÎÎ KAFJÎÎ KAFJÎÎ KAFJÎÎ KAFJÎÎ KAFJÎÎ KAFJÎÎ KAFJÎÎ KAFJÎÎ KAFJÎÎ KAFJÎÎ KA KAFJÎÎ KAFJÎÎ KAFJÎÎ KA KAFJÎÎ KAFJÎÎ KAFJÎÎ KA KA KA KA KA KA KA KA KA KA KA KA KA
F€ÌÅÞÅÙU∨UÅÙV	G€FIÈIG€F€ÈIG€€IÈIG€€HÈIG€€FÈIG€€€ÈIFJJJÈIFJJÎÈIFJJÎÈIFJJÊÈIFJJEÈIFJJ€ÈIFJJ€ÈIFJ] FJÌÎÈIFJÌFÈIFJÌ€ÈIFJÏÊÈIFJÏÊÈIFJÏÊÈIFJĨ€ÈIFJÎÈIFJÎÈIFJÎÈIFJÎÈIFJÎÈ FJÎÊÊIFJÎFÈIFJ΀ÈIFJÎÊÈIFJÎÎÈIFJÎÎÈIFJÎÎÊ FJIÎÊIFJIÎÊIFJIIÊIFJIÊÊIFJIÊÊIFJIÊÊ FJHFÊIFJH€ÊIFJGĴÊIFJGÌÊIFJGÎÊIFJGÎÊIFJGÎÊIFJGEÊIFJGFÊIFJG€
F€JÅÞÁÙUVU	G€FIÈ&G€F€È&G€€ÎÈ&G€€IÈ&G€€EË&GE€EË&GE€EË&FJJË&FJJÎË&FJJË&FJJË&FJJË FJÌ€Ë&FJĨÎË&FJĨË FJÎÊË&FJĨÎË FJÎÌË FJÎÌË FJIÌË FJIIË FJIIË FJIIË FJGË FJGË FJGË FJGË FJGË FJGË FJGË FJG
F€JÁÞÁÙU∨UÁÙV	G€FIÊAG€F€ÊAG€€IÊAG€€HÊAG€€FÊAG€€ÊÅFJJJÊAFJJÎÊAFJJÊÅFJJÊÅFJJFÊAFJJ€ÊAFJÌÊ Â FJÌÎÊAFJÌFÊAFJÌ€ÊAFJÏÎÊAFJÏGÊAFJÏFÊAFJÎYÊAFJÎEÂAFJÎJÊAFJÎÊAFJÎÊ FJÎHÊAFJÎGÊAFJÎFÊAFJÎÊÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÊAFJÎ
F€JÁÙUVUÁÙVÁÞ	G€FIÊ&G€FEÊ&GE€ÎÊ&G€€IÊ&G€€EÊ&GE€EÊ&GE€EÊ#JJJÊ#FJJÎÊ#FJJÊÊ#JJEÊ#JJFÊ#JJEÊ FJÎÎÊ#FJÎÊÊ#JÎEÊ#JÎEÊ#FJÎÊÊ#FJÎÎÊ#FJÎÊÊ#FJÎÊÊ#JÎÊÊ#FJÎÊÊ#FJÎÊ FJÎIÊ#FJÎÊ#FJÎÊÊ#FJÎÊÊ#FJÎÊÊ#FJÎÊÊ#FJÎÊÊ FJIÎÊ#FJIÎÊ#FJIÎÊ#FJIÊÊ#FJIÊÊ#FJIÊÊ FJHHÊ#FJHEÊ#FJHÊÊ#FJGJÊ#FJGÎÊ#FJGÎÊ#FJGÎÊ#FJGÎÊ#FJGÊ#FJGÊ#FJGÊ FJHHÊ#FJHEÊ#FJHEÊ#FJGÊÊ#FJGÎÊ#FJGÎÊ#FJGÎÊ#FJGÎÊ#FJGIÊ#FJGHÊ#FJGÊ#
FF€ÅÞÅÙUVU	G€FIÈ&G€FEÈ&G€€ÎÈ&G€€IÈ&G€€EË&GE€EË&GE€EË&FJJJË&FJJÎË&FJJË&FJJË&FJJË FJÌ€Ë&FJĨÎË&FJĨË FJĨËE&FJĨÎË FJĨĨË&FJĨÎË FJĨË FJIĞÊ FJIÊ FJIÊ FJIÊ FJGIÊ F FJGIÊ FJGIÊ FJGIÊ F FJGIÊ F F F F F F F F F F F F F F F F F F F
FF€ÅÞÁÙU∨UÁÙV	G€FIÈ&G€F€È&G€€IÈ&G€€EÈ&G€€EÈ&G€€EÅFJJJÈ&FJJÎÈ&FJJÊ&FJJEÅFJJEÅFJJ€ÅFJJ€ÅFJ] FJÌİÈ&FJÌEÅFJÌEÅFJÏEÅFJÏEÅFJÏË FJÌGÅFJÌEÅFJÌEÅFJÏÊ FJIÊ&FJIÊ FJIÎÊ FJIÎÊ FJIÊ FJHEÅFJHEÅFJIEÅFJIÊ FJHEÅFJHEÅFJGË AFJG AFJG AFJG AFJG AFJG AFJG AFJG AFJG
FF€ÁÙÁÙU∨U	G€FIÈÅG€F€ËÅG€€ÎÈÅG€€IËÅG€€HËÅG€€FËÅG€€ËÅFJJËÅFJJÎËÅFJJËÅFJJËÅFJJËÅFJJËÅFJ FJÌ€ËÅFJÏÎËÅFJÏÎËÅFJÏĞÅFJÏ€ËÅFJĴJËÅFJĴÎËÅFJĴÎËÅFJĴÎËÅFJĴIËÅFJĴËÅFJĴË FJÍÌËÅFJĨĨËÅFJĨÎËÅFJĨIËÅFJĨEÅFJĨ€ÅFJĨEÅFJĨË FJIIËÅFJIËÅFJJËÅFJHÌËÅFJHĨËÅFJHĨËÅFJHIËÅFJHEÅFJHËÅFJH€ ÅFJGIËÅFJGHËÅFJGFË FJGIËÅFJGHËÅFJGE

<u>5XXfYgg`FYgYUfW\YX</u>	5XXfYgg`Bch`=XYbh]Z]YX`]b`FYgYUfW\`Gc i fWY
FF€ÁÙÁÙU∨UÁÙV	G€FIÈÅG€F€ËÅG€€IÈÅG€€HËÅG€€FËÅG€€ËÅFJJJËÅFJJÎËÅFJJËÅFJJËÅFJJËÅFJJËÅFJJËÅF
FF€ÀÙUVUÀÙVÅÞ	G€FIÉAG€F€ÉAG€€ÎÊAG€€IÊAG€€HÊAG€€FÊAG€€EÂFJJJÊAFJJÎÊAFJJÎÊAFJJGÊAFJJFÊAFJJ€Â FJÌÎÊAFJÌÊAFJÌFÊAFJÌÊAFJÏÎÊAFJÏÎÊAFJÏÎÊAFJÏÊAFJÏÊAFJÎÊAFJÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊA FJÎIÊAFJÎHÊAFJÎGÊAFJÎÊAFJÎÊEAFJÎÊÊAFJÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎ FJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJÎÊAFJIÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎÊA FJHHÊAFJHÊAFJHÊÂFJHÊÂFJGÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGÊAFJGÊAFJGÊ
FF€ÁÙU∨UÁÙVÁÙ	G€FIÉAG€F€ÉAG€€ÎÉAG€€IÉAG€€HÉAG€€FÉAG€€EÉAFJJÉAFJJÎÉAFJJÎÉAFJJGÉAFJJEÁFJJEÉA FJÌÎÉAFJÌÉAFJÌEAFJÌÊAFJÌÎÉAFJÏÍÉAFJÏGÉAFJÏÊAFJÏÊAFJĬÊAFJÎÊAFJÎÊAFJÎÎÉAFJÎ FJÎIÊAFJÎHÊAFJÎGÊAFJÎÊAFJÎÊAFJÎÊAFJÎÊAFJÎÊAFJÎÊAFJÎÊAFJÎ
FFFÁÞÁÙUVUÁÙV	G€FIÈ&G€F€È&G€€ÎÈ&G€€IÈ&G€€FÈ&G€€EÈ&GE€EÈ&FJJÈ&FJJÎÈ&FJJÎÈ&FJJÊ&FJJÊ&FJJÊ FJÌÎÈ&FJÌÉ&FJÌEÅFJÌÊ FJÎIÊ&FJÎÊ FJÎIÊ FJÎIÊ FJIÎÊ FJIÎÊ FJIÎÊ FJHÊ FJHÊ FJHÊ FJHÊ FJHÊ FJHÊ FJHÊ FJH
FFÁÙÁÙUVU	G€FIÈAG€F€ÈAG€€ÎÈAG€€IÈAG€€HÈAG€€FÈAG€€EÈAFJJÈAFJJÎÈAFJJÎÈAFJJÊÀAFJJÊÀAFJJÊÀAFJJÊÈAFJÌÊ FJÌ€ÈAFJĨÎÈAFJĨÎÈAFJĨGÈAFJĨFÈAFJĨ9ÈAFJÎJÈAFJÎÎÈAFJÎÎÈAFJÎÎÈAFJÎÎÈAFJÎÊ FJÎÌÈAFJÎÎÈAFJÎÎÈAFJÎÎÈAFJÎÎÊAFJÎÊAFJÎÊÊAFJÎ FJIIÊAFJIGÊAFJI€ÊAFJHJÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHHÊAFJHGÊAFJHFÊAFJH€Ê FJGJÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGIÊAFJGHÊAFJGE
FFÁÙÁÙUVUÁÙV	G€FIÊ&G€FÊÊ&GÊ€ÊÊ&GE€IÊ&G€€FÊ&GE€EÊ&GE€Ê&FJJÊ&FJJÎÊ&FJJÎÊ&FJJÊ&FJJÊ&FJJÊ FJÎÎÊ&FJÎÊ&FJÎÊ&FJÎÊ&FJÎÊ FJÎHÊ&FJÎGÊ&FJÎÊ&FJÎÊ FJÎHÊ&FJÎGÊ&FJÎÊ FJÎÎÊ FJIÎÊ&FJIÎÊ FJHHÊ&FJHÊ&FJIÎÊ FJHHÊ&FJHÊ&FJHÊ E FJHHÊ&FJHÊ&FJHÊ E FJHHÊ&FJHÊ&FJHÊ E FJHHÊ&FJHÊ E FJHHÊ FJHÊ E FJHÊ E FJHÊ E FJHÊ E FJHÊ E FJHÊ E FJHÊ E FJHÊ E FJHÊ E FJÊ E F F F F F F F F F F F F F F F F F F
FFHÁFÐGÁÙÁÙUVU	G€FIÈAG€F€ÈAG€€ÎÈAG€€IÈAG€€HÈAG€€FÈAG€€EÀFJJJÈAFJJÎÈAFJJÎÈAFJJGÈAFJJFÈAFJÌÊ FJÌÍÈAFJÌFÈAFJÌ€ÈAFJÏÎÈAFJÏÍÈAFJÏGÈAFJÏFÈAFJÎJÈAFJÎJÈAFJÎÌÈAFJÎÎÈAFJÎÎÈAFJÎÎÈAFJÎ FJÎHĖAFJÎGÈAFJÎFÈAFJÎÊAFJIÎÈAFJIÎÈAFJIÎÈAFJIÎÊAFJIÎÊAFJIÊAFJIÊ FJIÌÈAFJIÎÈAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÈAFJIÊAFJHĴÈAFJHÌÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎÊA FJHHÊAFJHGÊAFJHFÊAFJH€ÊAFJGJÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGIÊAFJGHÊAFJGFÊAFJG€
FFHÁÙÁÙUVUÁÙV	G€FIÉAG€F€ÉAG€€IÉAG€€HÉAG€€FÉAG€€€ÉAFJJJÉAFJJÎÉAFJJÎÉAFJJGÉAFJJFÉAFJJ€ÉAFJÌÊA FJÌÍÉAFJÌFÉAFJÌ€ÉAFJÏ∫ÉAFJÏGÉAFJÏFÉAFJÏ€ÉAFJÎJÉAFJÎÏÉAFJÎÎÉAFJÎ FJÎGÊAFJÎFÊAFJ΀ÊAFJÏÎÉAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎ FJIÎÊAFJIÎÊAFJI]ÊAFJIÊÊAFJIÎÊAFJIÎÊAFJÎÎÊAFJIÎÊAFJIÎÊAFJHÎÊAFJHIÊAFJH FJIÎÊAFJIÎÊAFJIIÊAFJI EAFJIÎÊAFJIÎÊAFJIÊÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGIÊAFJGEÊAFJGEÊ FJHFÊAFJGHÊAFJGJÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGIÊAFJGIÊAFJGEÊ
FFHÁÙUVUÁÙVÁÙ	G€FIÈ&G€F€È&G€€ÎÈ&G€€IÈ&G€€FÈ&G€€EÈ&GE€E&EÈ&FJJÈ&FJJÎÈ&FJJÎÈ&FJJÊ&FJJÊ&FJJÊ&FJJÊ FJÌÎÈ&FJÌÊ&FJÌÊ&FJÌÊ&FJÌÊ FJÎIÊ&FJÎÊ&FJÎÊ&FJÎÊ FJÎIÊ&FJÎÊ FJIÎÊ FJIÎÊ FJHÊ&FJIÎÊ FJHÊ&FJHÊ&FJHÊ FJHÊ&FJHÊ&FJHÊ FJHÊ FJHÊ FJHÊ FJHÊ FJHÊ FJHÊ FJHÊ
FF I ÁFÐGÁÙÁÙUVU	G€FIÈAG€F€ÈAG€€ÎÈAG€€IÈAG€€EÈAG€€EÈAFJJÈAFJJÎÈAFJJÎÈAFJJÊÀAFJJÊÀAFJJÊÈAFJJÊÈAFJÌÊÈA FJÌÎÈAFJÌÊÈAFJÌÊÈAFJÏÎÈAFJÏÎÈAFJÏGÈAFJÏËÈAFJÎJÈAFJÎÌÈAFJÎÎÈAFJÎÎÈAFJÎÎÈAFJÎÎÈAFJÎÎÈAFJÎ FJÎHÊAFJÎGÊAFJÎÊÊAFJÎÊÊAFJÎÎÊAFJIÎÊAFJIÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJIÎÊ FJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÊÊAFJAJÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎÊ FJHHÊAFJHGÊAFJHFÊAFJHÊÊAFJGJÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGHÊAFJGHÊAFJGÊ
FFIÁÙÁÙUVU	G€FIÈAG€F€ÈAG€€ÎÈAG€€IÈAG€€HÈAG€€FÈAG€€EÈAFJJÈAFJJÎÈAFJJÎÈAFJJÊÀAFJJÊÀAFJJÊÈAFJÌËAFJÌË FJÌ€ÈAFJĨÎÈAFJĨÎÈAFJÏĞÊAFJĬFÈAFJĨJÊAFJÎJÊAFJÎÎÈAFJÎÎÈAFJÎÎÈAFJÎÎÈAFJÎÎÈAFJÎ FJÎFÊAFJ΀ÊAFJÎÎÈAFJÎÎÈAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÊÊAFJIÊAFJI] FJIÎÊAFJIÎÊAFJIÎÊAFJIÊAFJHÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHIÊAFJHGÊAFJHFÊAFJH€ÊAFJGÎÊ AFJGÎÊAFJGÎÊAFJGÎÊAFJGÊÊAFJG€Ê

<u>5XXfYgg`FYgYUfW\YX</u>	5XXfYgg`Bch`=XYbh]Z]YX`]b`FYgYUfW\`GcifWY
FFIÁÙÁÙUVUÁÙV	G€FIÈÅG€F€ËÅG€€IÈÅG€€HËÅG€€FËÅG€€ËÅFJJJËÅFJJÎËÅFJJËÅFJJËÅFJJËÅFJJËÅFJJËÅF
FFIÁÙUVUÁÙVÁÙ	G€FIÉAG€F€ÊAG€€ÎÊAG€€IÊAG€€HÊAG€€FÊAG€€EÂFJJJÊAFJJÎÊAFJJÎÊAFJJGÊAFJJEÂFJJÊÂFJJÊÂFJJÊÂFJJÊÂFJÎ FJÎÎÊAFJÎÊAFJÎÊAFJÎÊAFJÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÊAFJ
FFÍÅÞÁÙUVU	G€FIÈAG€F€ÈAG€€ÎÈAG€€IÈAG€€HÈAG€€FÈAG€€EÈAFJJÈAFJJÎÈAFJJÎÈAFJJGÈAFJJĒÀFJ]ÎÈAFJÌÉAFJÌÉAFJÌÉAFJÌÉAFJÌÉ FJÌ€ÈAFJĨÎÈAFJĨÎÈAFJĨGÈAFJĨ€ÈAFJĨĴÈAFJÎÎÈAFJÎÎÈAFJÎÌÈAFJÎÌÈAFJÎÊAFJIÎÈAFJIÎÈAFJIÎÈAFJIÎÈAFJIÎÈA FJĨĨÈAFJIÎÊAFJÍÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÊAFJIÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊA FJI€ÊAFJHJÊAFJHÌÊAFJHÎÊAFJHÎÊAFJHIÊAFJHGÊAFJHFÊAFJH€ÊAFJGÌÊAFJGĨÊAFJGÎÊAFJGÎÊA FJGHÊAFJGFÊAFJG€
FF Í ÁÞÁÙUVUÁÙV	G€FIÈÅG€F€ÈÅG€€IÈÅG€€HÈÅG€€FÈÅG€€€ÅFJJJÈÅFJJÊÅFJJÉÅFJJEÅFJJ€ÅFJJ€ÅFJJ€ÅFJÌÊÅ FJÌÉÅFJÌFÅFJÌ€ÅFJÏ€ÅFJÏGÅFJÏFÅFJÏ€ÅFJÏ€ÅFJÎËÅFJÎËÅFJÎËÅFJÌË FJÎGÅFJÎFÅFJ΀ÅFJÏÊÅFJÏÊÅFJÏËÅFJÏËÅFJÏ FJIÎÊÅFJIÎÊÅFJI FJHFÅFJH€ÅFJGÈÅFJGËÅFJGĨÊÅFJGÎÊÅFJGIÊÅFJGIÊÅFJGFÅFJG€€
FF Í ÁÙUVUÁÙVÁÞ	G€FIÈÅG€F€ÈÅG€€ÎÈÅG€€IÈÅG€€HÈÅG€€FËÅG€€ËÅFJJJËÅFJJÎÈÅFJJÊÅFJJGÅÅFJJFÅFJJ€Å FJÌÎÈÅFJÌÉÅFJÌFÅFJÌ€ÅFJÌÊÅFJÏÎÈÅFJÏGÅFJÏFÅFJÏËÅFJÏEÅFJĴJËÅFJĴÌËÅFJÎÈÅFJÌÊÅFJÌ FJÎIÈÅFJÎHÅFJÎGÅFJÎÊÅFJÎÊÅFJÎ FJIÌÈÅFJIÎÊÅFJIÎÊÅFJIÊÅFJÎ FJIIÈÅFJIÎÊÅFJIÎÊ FJHHÅFJHGÅFJHFÅFJH€ÅFJGJËÅFJGÌÊÅFJGÎÊÅFJGÎÊÅFJGIÊÅFJGHÅFJGFÅFJG
FFÎÁFÐGÁÞÁÙUVU	G€FIÊAG€F€ÊAG€€ÎÊAG€€IÊAG€€HÊAG€€FÊAG€€EÊAFJJÊAFJJÎÊAFJJÎÊAFJJÊÂAFJJÊÂAFJJÊÊAFJÌÊ FJÌÎÊAFJÌFÊAFJÌÊÊAFJÏÎÊAFJÏÎÊAFJÏÊÊAFJÏFÊAFJÎJÊAFJÎ]ÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊA FJÎHÊAFJÎGÊAFJÎFÊAFJÎÊÊAFJÎÎÊAFJIÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÊAFJÎÊAFJÎÊ FJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÊÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎÊ FJHHÊAFJHÊÊAFJHÊÂFJHÊÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGIÊAFJGHÊAFJGÊ
FFÎÁÞÁÙUVU	G€FIÈAG€F€ÈAG€€ÎÈAG€€IÈAG€€HÈAG€€FÈAG€€EÀFJJJÈAFJJÎÈAFJJÎÈAFJJGÈAFJJFÈAFJÌÎÈA FJÌÍÈAFJÌFÈAFJÌ€ÈAFJÏÎÈAFJÏÎÈAFJÏGÈAFJÏFÈAFJÎJÈAFJÎĴÈAFJÎÎÈAFJÎÎÈAFJÎIÈAFJÎ FJÎGÊAFJÎFÈAFJ΀ÈAFJĬÌÈAFJĬÎÈAFJIÎÈAFJIÎÈAFJIÎÊAFJI FJIÎÊAFJIÎÊAFJIÎÊAFJIÎÈAFJIÎÈAFJIÎÈAFJHÌÈAFJHÎÊAFJHIÊAFJHHÈAFJHHÊAFJHGÈAFJHFÈ A FJH€ÊAFJGÌÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGHÊAFJGFÊAFJG€
FFÎÅÞÁÙUVUÁÙV	G€FIÈAG€F€ÈAG€€IÈAG€€FÈAG€€EÈAG€€EÈAFJJJÈAFJJÎÈAFJJÎÈAFJJĒÀFJJĒÀFJJĒÀFJJĒÈAFJÌĒÈA FJÌİÈAFJÌFÈAFJÌ€ÈAFJÏÎÈAFJÏİÈAFJÏGÈAFJÏFÈAFJÏEÀAFJÎJÈAFJÎÎÈAFJÎÊAFJÎÎÈAFJÎ FJÎHÊAFJÎGÊAFJÎFÊAFJÎÊÊAFJÎÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÊAFJIÊÊAFJI FJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJHÎÊAFJHÎÊAFJHIÊAFJHIÊAFJHIÊ FJHGÊAFJHFÊAFJH€ÊAFJGJÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGIÊAFJGHÊAFJGFÊAFJG€
FFÎ ÂÙUVUÂÙVÂÞ	G€FIÈAG€F€ÈAG€€ÎÈAG€€IÈAG€€EÈAG€€EÈAFJJÈAFJJÎÈAFJJÎÈAFJJGÈAFJJEÀFJJÊ FJÌÎÈAFJÌÉÀFJÌEÈAFJÌ€ÈAFJĨÎÈAFJĨIÊAFJĨGÈAFJĨEÀAFJĨÈAFJĨÈAFJĨÌÈAFJÎÎÈAFJÎÎÈAFJÎ FJÎIÈAFJÎHÊAFJÎGÈAFJÎEAFJ΀ÊAFJÎÎÈAFJÎÎÈAFJÎÎÈAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJIÎÊ FJIÌÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJAÎÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎ FJHHÊAFJHGÊAFJHFÊAFJH€ÊAFJGÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGIÊAFJGHÊAFJGÊÊAFJG E
FFÌÁÐIÁÞÁÙUVU	G€FIÈÅG€F€ÈÅG€€ÎÈÅG€€IÈÅG€€FËÅG€€FËÅG€€EËÅFJJËÅFJJĨÈÅFJJËÅFJJËÅFJJËÅFJJËÅFJJËÅFJJËÅFJJËÅFJJ
FFÌÁÞÁÙUVUÁÙV	G€FIÊÅG€F€ÊÅG€€IÊÅG€€HÊÅG€€FÊÅG€€ÊÅFJJJÊÅFJJÎÊÅFJJÊÅFJJÊÅFJJÊÅFJJÊÅFJ FJÌÎÊÅFJÌÊÅFJÌÊÅFJÏÎÊÅFJÏÎÊÅFJÏÎÊÅFJÏÊÅFJÏÊÅFJÎÊÅFJÎÊÅFJÎÊÅFJÎÊÅFJÎÊ FJÎHÊÅFJÎÊÅFJÎÊÅFJÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÊÅFJ

<u>5XXfYgg`FYgYUfW\YX</u>	5XXfYgg`Bch`=XYbh]Z]YX`]b`FYgYUfW\`GcifWY
FFÌÁÙÁÙUVU	G€FIÈÅG€F€ÈÅG€€ÎÈÅG€€IÈÅG€€HĖÅG€€FĖÅG€€EÅFJJJĖÅFJJĨÈÅFJJĨĖÅFJJGĖÅFJJFĖÅFJÌÉ Å FJÌ€ĖÅFJĨÎĖÅFJĨIĖÅFJĨGĖÅFJĨ€ĖÅFJĨJĖÅFJĨÎĖÅFJĨIĖÅFJĨIĖÅFJĨIĖÅFJĨĖÅFJĨĒ FJÍĨĖÅFJĨÎĖÅFJĨĨĖÅFJĨEÅFJĨGĖÅFJĨĚÅFJĨĨĖÅFJIJĖÅFJIÌĖÅFJIĨĖÅFJIĨĖÅFJI FJI€ĖÅFJHJĖÅFJHĨĖÅFJHĨĖÅFJHĨĖÅFJHĨĖÅFJHIĖÅFJHGĖÅFJHEÅFJH€ĖÅFJGÌĖÅFJGĨĖÅ FJGÍĖÅFJGHĖÅFJGFĖÅFJG€
FFÌÀÙÀÙUVUÁÙV	G€FIÈÁG€F€ÈÁG€€IÈÁG€€HÈÁG€€FÈÁG€€€ÈÁFJJJÈÁFJJÎÈÁFJJÎÈÁFJJEÈÁFJJ€ÈÁFJ]€ÈÁFJÌÈ À FJÌİÉÁFJÌFÈÁFJÌ€ÈÁFJÏÎÈÁFJÏÎÈÁFJÏGÈÁFJÏFÈÁFJÎJÈÁFJÎJÈÁFJÎÌÈÁFJÎÈÁFJÎÈÁFJÎÈÁFJÎ FJÎHÈÁFJÎGÈÁFJÎFÈÁFJ΀ÈÁFJIÎÈÁFJIÎÈÁFJIÎÈÁFJÍÎÈÁFJÍIÈÁFJÍIÈÁFJIÌÈÁFJIÌÈ FJIÌÈÁFJIÏÈÁFJIÎÈÁFJIÎÈÁFJI]ÈÁFJIËÈÁFJGÌÈÁFJGÌÈÁFJGÌÈÁFJGIÈÁFJGHÈÁFJGÉÅFJG FJHHÈÁFJHGÈÁFJHFÈÁFJH€ÈÁFJGJÈÁFJGÌÈÁFJGÌÈÁFJGÌÈÁFJGIÈÁFJGHÈÁFJGÉÁFJG€
FFÌÀÙUVUÀÙVÁÞ	G€FIÈÅG€F€ÈÅG€€ÎÈÅG€€IÈÅG€€HĖÅG€€FĖÅG€€EÅFJJÈÅFJJĨÈÅFJJĨÈÅFJJĜÅFJJËÅFJJËÅFJJËÅFJJËÅFJJĒÅFJĨËÅFJĨËÅFJĨËÅFJĨËÅFJĨ FJĨĨĖÅFJĨĖÅFJĨĒÅFJĨĒÅFJĨĨĖÅFJĨĬËÅFJĨĬËÅFJĨĬËÅFJĨËÅFJĨĨËÅFJĨĬËÅFJĨĨËÅFJĨĨËÅFJĨĨËÅFJĨĨË FJĨĨĖÅFJĨHĖÅFJĨĒÅFJĨĨĖÅFJĨĨËÅFJĨĨËÅFJĨĨËÅFJĨĨËÅFJĨĨËÅFJĨĨËÅFJĨĨËÅFJĨĨËÅFJĨĨË FJIÌËÅFJĨĨËÅFJIĨËÅFJIĨËÅFJIĨËÅFJIĨËÅFJĨĨËÅFJĞĨËÅFJGĨËÅFJGĨËÅFJGĨËÅFJGË FJHHËÅFJHGËÅFJHEÅFJGĒÅFJGJËÅFJGĨËÅFJGĨËÅFJGĨË
FFÌÁÙUVUÁÙVÁÙ	G€FIÈÅG€F€ÈÅG€€ÎÈÅG€€IÈÅG€€HĖÅG€€FĖÅG€€EÅFJJÈÅFJJĨÈÅFJJĨÈÅFJJĜÅFJJËÅFJJËÅFJJËÅFJJËÅFJJĒÅFJĨËÅFJĨËÅFJĨËÅFJĨËÅFJĨ FJĨĨĖÅFJĨĖÅFJĨĒÅFJĨĒÅFJĨĨĖÅFJĨĬËÅFJĨĬËÅFJĨĬËÅFJĨËÅFJĨĨËÅFJĨĬËÅFJĨĨËÅFJĨĨËÅFJĨĨËÅFJĨĨË FJĨĨĖÅFJĨHĖÅFJĨĒÅFJĨĨĖÅFJĨĨËÅFJĨĨËÅFJĨĨËÅFJĨĨËÅFJĨĨËÅFJĨĨËÅFJĨĨËÅFJĨĨËÅFJĨĨË FJIÌËÅFJĨĨËÅFJIĨËÅFJIĨËÅFJIĨËÅFJIĨËÅFJĨĨËÅFJĞĨËÅFJGĨËÅFJGĨËÅFJGĨËÅFJGË FJHHËÅFJHGËÅFJHEÅFJGĒÅFJGJËÅFJGĨËÅFJGĨËÅFJGĨË
FGFÁÞÁÙUVU	G€FIÈÅG€F€ÈÅG€€ÎÈÅG€€IÈÅG€€HËÅG€€FËÅG€€ËÅFJJËÅFJJÎÈÅFJJÎÈÅFJJGÈÅFJJËÅFJ]ÎÉÅ FJÌ€ÅFJĨÎÈÅFJĨÎĖÅFJĨGĖÅFJĨ€ÅFJĨĴĖÅFJĨÎĖÅFJÎÎÈÅFJĨIÈÅFJĨHÅFJĨGĖÅFJĨĒÅFJĨ FJÍÌÈÅFJĨĨĖÅFJÍÎĖÅFJÍĨĖÅFJÍGĖÅFJĨEÅFJÍEÅFJI FJIIĖÅFJI€ÅFJHJĖÅFJHÌĖÅFJHĨĖÅFJHIĖÅFJHIĖÅFJHHĖÅFJHGĚÅFJH€ÅFJGÌĖÅ FJGĨĖÅFJGĨĖÅFJGHĖÅFJGFĖÅFJG€
FGFÁÞÁÙUVUÁÙV	G€FIÈÅG€F€ÈÅG€€IÈÅG€€HÈÅG€€FÈÅG€€€ÅFJJJÈÅFJJÎÈÅFJJÎÈÅFJJGÈÅFJJFÈÅFJJ€ÅFJÌÊÅ FJÌİÉÅFJÌFÅFJÌ€ÅFJÏÊÅFJÏİÈÅFJÏGÈÅFJÏFÅFJÏEÅÅFJÎJÈÅFJÎJÈÅFJÎÈÅFJÌÊÅFJÌÊ FJÎHĖÅFJÎGÅFJÌFÈÅFJ΀ÅFJIÎÈÅFJIÎÈÅFJIİÈÅFJIİÊÅFJIĞÅFJIÊÅFJIÊÅFJI FJIËÅFJIÎÊÅFJIİÊÅFJIÊÅFJGÈÅFJIËÅÅFJGÏÊÅFJGÌÊÅFJGIÊÅFJGHÊÅFJGFÅFJG FJHGÊÅFJHFÊÅFJH€ÅFJGJÈÅFJGĨĖÅFJGĨÊÅFJGÎÊÅFJGIÊÅFJGHÊÅFJGFÊÅFJG€
FGFÁÙUVUÁÙVÁÞ	G€FIÈÅG€F€ÈÅG€€ÎÈÅG€€IÈÅG€€HĖÅG€€FĖÅG€€EÅFJJEÅFJJĨÈÅFJJĨĖÅFJJGĖÅFJJEÅFJJĒÅFJJĒÅFJJĒ FJÌĨĖÅFJĨÉÅFJÌĒÅFJÌ€ÅFJĨĨĖÅFJĨĬĖÅFJĨGĚÅFJĨĞÅFJĨĒÅFJĨĒÅFJĨĞÅFJĨĬĖÅFJĨĨĖÅFJĨ FJĨIĖÅFJĨHĖÅFJĨGĖÅFJĨĒ FJIÌĖÅFJIĨĖÅFJIÎĖÅFJIĨĖÅFJĨĢĚÅFJĨĒÅFJĨĒÅFJĨĒÅFJĨĖÅFJĬĨĖÅFJĬĨĖÅFJĬĨ FJHHĖÅFJHGĖÅFJHFĖÅFJGĖÅFJGJĖÅFJGĨĖÅFJGĨĖÅFJGĨĖÅFJGIĖÅFJGIĖÅFJGEÅFJGĒ
FGGÁÙUVUÁÙVÁÞ	G€FIÈÅG€F€ÈÅG€€ÎÈÅG€€IÈÅG€€HĖÅG€€FÈÅG€€EÅFJJÈÅFJJĨÈÅFJJÎÈÅFJJĜÅFJJËÅFJJËÅFJJËÅFJJËÅFJJËÅFJĨÈÅFJĨËÅFJĨ FJĨÎĖÅFJĨÉÅFJĨEÅFJĨ€ÅFJĨÊÅFJĨÎÈÅFJĨĬËÅFJĨĞÅFJĨËÅFJĨËÅFJĨËÅFJĨĬËÅFJĨÎËÅFJĨÎËÅFJĨÎ FJĨÌĖÅFJĨHĖÅFJĨĜÅFJĨĒÅFJĨĒ FJIÌĖÅFJIĨĖÅFJIÎÊÅFJIÎĖÅFJIĒÅFJIËÅFJĨËÅFJĨËÅFJĞÎ FJHHĖÅFJHGÅFJHFĖÅFJH€ÅFJGJĖÅFJGĨĖÅFJGĨĖÅFJGĨÊÅFJGIĖÅFJGHĖÅFJGĒ
FGHÁÙÁÙUVUÁÙV	G€FIÈÅG€F€ÈÅG€€IÈÅG€€HÈÅG€€FÈÅG€€€ÅFJJJÈÅFJJÎÈÅFJJÎÈÅFJJGÈÅFJJEÅFJJ€ÅFJÌÊÅ FJÌİÈÅFJÌFÅFJÌ€ÅFJÏİÉÅFJÏGÅFJÏFÅFJÏ€ÅFJÎJÈÅFJÎÌÈÅFJÎÌÈÅFJÌÈÅFJÌÈÅFJÌ FJÌĜĖÅFJÌFÅFJÌ€ÅFJÍĨÈÅFJÍÌÈÅFJIÌÈÅFJIİÈÅFJÍGÅFJIİÈÅFJIĒÅFJIÌÈÅFJIÌÈÅFJIÌÈÅ FJIÎĖÅFJIİÊÅFJIIÊÅFJIĞÅFJGĨÈÅFJGĨÈÅFJGIÊÅFJGIÅFJGFÅFJG€
FG Ι Α̈́ὐΑ̈́ŮŪVU	G€FIÈÅG€F€ÈÅG€€ÎÈÅG€€IÈÅG€€FËÅG€€FËÅG€€EËÅFJJËÅFJJÎËÅFJJÎËÅFJJËÅFJJËÅFJJËÅFJ]ËÅFJ]ËÅFJ]ËÅFJÏ FJÌ€ÅFJĨĨËÅFJĨËÅFJĨĞÅFJĨ€ÅFJĨ€ÅFJĨĴËÅFJĨÎËÅFJĨÌËÅFJĨÌËÅFJĨËÅFJĨËÅFJĨÊ FJĨËÅFJĨÎÊÅFJĨÎËÅFJĨËÅFJĨEÅFJĨË FJI€ÅFJHJËÅFJHÌËÅFJHÎËÅFJHIËÅFJHGËÅFJHEÅFJH€ÅFJGÌËÅFJGÏËÅFJGĨËÅFJGĨË FJGHËÅFJGFËÅFJG€
FG I ÁÙÁÙUVUÁÙV	G€FIÈÅG€F€ÈÅG€€IÈÅG€€HÈÅG€€FÈÅG€€€ÅFJJJÈÅFJJÎÈÅFJJÎÈÅFJJËÅFJJËÅFJJ€ÅFJ] FJÌÍÈÅFJÌFÈÅFJÌ€ÅFJÏÍÈÅFJÏÍÈÅFJÏFÈÅFJÏ€ÅFJÎĴÈÅFJÎÌÈÅFJÎÎÈÅFJÎÉÅFJ] FJÎGËÅFJÎFÊÅFJÌ€ÅFJÏĨÈÅFJÍĨÈÅFJĨÌÈÅFJIÎËÅFJÎ FJIÎÊÅFJIÎÊÅFJI]ÊÅFJIĞÅFJI FJHFÊÅFJHÊÅFJI]ÊÅFJIĞÅFJGĨÈÅFJGĨÊÅFJGIÊÅFJGIÊÅFJGFÊÅFJG€

<u>5XXfYgg`FYgYUfW\YX</u>	5XXfYgg`Bch`=XYbh]Z]YX`]b`FYgYUfW\`GcifWY
FG I ÁÙÁÙ [c[ÁÙc	G€€ÎÊÅG€€IÊÅG€€HÊÅG€€FÊÅG€€€ÅFJJJÊÅFJJÎÊÅFJJÎÊÅFJJÊÅFJJĒÅFJJĒÅFJÌÎÊÅFJÌÎÊÅFJÌÎÊÅFJÌÎÊÅFJÌÎÊÅFJÌÎÊÅFJÌÎÊÅFJÌÎÊÅFJÌÎÊÅFJÌÎÊÅFJÌÎÊÅFJÌÎÊÅFJÌÎÊÅFJÌÎÊÅFJÌÎÊÅFJÎÎÊ FJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJHÎÊÅFJHÎÊÅFJHÎÊÅFJHÎÊÅFJHÎÊ FJHGÊÅFJHFÊÅFJHEÂFJGJÊÅFJGÎÊÅFJGÎÊÅFJGÎÊÅFJGÎÊÅFJGIÊÅFJGIÊÅFJGÊÅFJGÊ
FG I ÁÙÁÙ [c[ÁÙc	G€€ÎʦG€€IʦG€€EHʦG€€EʦG€€€Ê¦FJJJʦFJJÎʦFJJÎʦFJJÊÎFJJÊÎFJJÊÊFJ]ÊÊFJÌÊÊ FJÎÊÊFJ΀ʦFJÎÎʦFJÎÎÊ FJÎÊÊFJÎÊÊ FJÎÊÊFJÎÊÊ FJÎÊÊFJÎÊÊ FJÎÊÊFJÎÊÊ
FG I ÁÙUVUÁÙVÁÞ	G€FIÉAG€F€ÉAG€€ÎÊAG€€IÊAG€€HÊAG€€FÊAG€€ÊAFJJJÊAFJJÎÊAFJJÊAFJJGÊAFJJFÊAFJJ€Ê FJÌÎÊAFJÌÊAFJÌFÊAFJÌÊAFJÏÎÊAFJÏÎÊAFJÏGÊAFJÏÊAFJÎÊAFJÎÊAFJÎÊAFJÎÊAFJÎÎÊAFJÎÎÊAFJÎ FJÎIÊAFJÎHÊAFJÎGÊAFJÎÊAFJÎÊAFJÎÊAFJÎÊAFJÎÊAFJÎÊAFJÎÊAFJÎ
FGIÁÙUVUÁÙVÁÙ	G€FIÉAG€F€ÉAG€€ÎÉAG€€IÉAG€€HÉAG€€FÉAG€€EAFJJÉAFJJÎÉAFJJÎÉAFJJÉAFJJÊÁFJJEÅFJJĒÂFJJĒÂFJJĒÂFJÌ FJÌÎÉAFJÌÉAFJÌEAFJÌÊAFJÌÎÉAFJÏÎÉAFJÏÎÉAFJÏÊAFJÏÊAFJÏÊAFJÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊA FJÎIÊAFJÎHÊAFJÎGÊAFJÎÊAFJÎÊAFJÎÊEAFJÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎ FJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÊAFJIÎÊAFJAÎÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎÊA FJHHÊAFJHGÊAFJHFÊAFJHÊÂFJGJÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGIÊAFJGHÊAFJGÊAFJGÊ
FG Í ÁFÐGÁÙÁÙUVU	G€FIÊ&G€F€Ê&G€€ÎÊ&G€€IÊ&G€€FÊ&GE€EÊ&GE€Ê&FJJJÊ&FJJÎÊ&FJJÊ&FJJÊ&FJJÊ&FJJÊ FJÌÎÊ&FJÌFÊ&FJÌ€&FJÏÊ&FJÏÎÊ&FJÏÊ&FJÏÊ FJÎHÊ&FJÎG&FJÎFÊ&FJÎÊ FJÎHÊ&FJÎÊ&FJÎÊ FJÎÎÊ FJIÎÊ&FJIÎÊ FJHHÊ&FJHÊ&FJIÎÊ FJHHÊ&FJHFÊ&FJHÊ &FJHHÊ&FJHFÊ&FJHÊ E FJHHÊ&FJHÊ&FJHÊ B FJHHÊ&FJHÊ B FJHHÊ FJHHÊ
FGÍÁÙÁÙUVU	G€FIÉAG€F€ÉAG€€ÎÉAG€€IÉAG€€HÉAG€€EÉAG€€EÉAFJJJÉAFJJÎÉAFJJÎÉAFJJGÉAFJJEÅFJJEÉA FJÌÍÉAFJÌ€ÉAFJÏÎÉAFJÏÎÉAFJÏGÉAFJÏ€ÉAFJÎJÉAFJÎÎÉAFJÎÎÉAFJÎIÉAFJÎHÊAFJÎGEAFJÎÊ FJ΀ÊAFJÎÌÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎ FJIÎÊAFJIIÊAFJIÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎ FJGÎÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGÊAFJGEÊAFJG€
FGÍÁÙÁÙUVUÁÙV	G€FIÈ&G€F€È&G€€IÈ&G€€EÈ&G€€EÈ&GE€EÈ&FJJJÈ&FJJÎÈ&FJJÊ&FJJEÈ&FJJ€È&FJJ€È&FJ] FJÌÉ&FJÌEÈ&FJÌ€È&FJÏÊE&FJÏEÈ&FJÏEÈ&FJÏ€È&FJÏÈ&FJÎÈ&FJÎÈ&FJÎÈ FJÎÊE&FJÎÊE&FJ΀E FJÎÊE&FJÎÊE&FJÎÊE FJIÎÊ&FJIÎÊ&FJIÊE FJIÊÊ&FJIÊE FJHEÊ&FJGÊE&FJGÊE FJHEÊ&FJGÊE FJHEÊ FJHEÊ FJHEÊ
FGÍÁÙUVUÁÙVÁÞ	G€FIÈ&G€F€È&G€€ÎÈ&G€€IÈ&G€€FÈ&GE€EÈ&GE€EÈ&FJJDÈ&FJJÎÈ&FJJĜÈ&FJJGÈ&FJJEÈ&FJJ€È FJÌÎÈ&FJÌÉ&FJÌEÈ&FJÌ€È&FJĨÊ&FJĨÉ&FJĨÊE FJÎIÈ&FJÎÊ&FJÎGÈ&FJ΀E FJÎIÈ&FJÎÊ FJIÌÈ&FJIÎÊ FJIIÈ&FJIÎÊ FJHHÊ&FJHGÊ&FJHFÊ&FJGJÊ&FJGÌÊ&FJGĨÊ&FJGÎÊ FJHHÊ&FJHGÊ&FJHFÊ&FJGJÊ FJHHÊ&FJHGÊ FJHHÊ
FGÍÁÙUVUÁÙVÁÙ	G€FIÈ&G€F€È&G€€ÎÈ&G€€IÈ&G€€FÈ&GE€EÈ&GE€EÈ&FJJDÈ&FJJÎÈ&FJJĜÈ&FJJGÈ&FJJEÈ&FJJ€È FJÌÎÈ&FJÌÉ&FJÌEÈ&FJÌ€È&FJĨÊ&FJĨÉ&FJĨÊE FJÎIÈ&FJÎÊ&FJÎGÈ&FJ΀E FJÎIÈ&FJÎÊ FJIÌÈ&FJIÎÊ FJIIÈ&FJIÎÊ FJHHÊ&FJHGÊ&FJHFÊ&FJGJÊ&FJGÌÊ&FJGĨÊ&FJGÎÊ FJHHÊ&FJHGÊ&FJHFÊ&FJGJÊ FJHHÊ&FJHGÊ FJHHÊ
FGÎÂÙÁÓ¦^^ảÀÙc	G€FIÈÅG€€ÎÈÅG€€IÈÅG€€HÈÅG€€FÈÅG€€€ÅFJJJÈÅFJJÎÈÅFJJÎÈÅFJJGÈÅFJJFÈÅFJJ€ÅFJÌÊÅ FJÌÎÈÅFJÌFÈÅFJÌ€ÅFJÏÎÈÅFJĬÎÈÅFJĬGÈÅFJĬFÅFJĨEÅFJĴJÈÅFJĴÌÈÅFJÎÈÅFJÎÊ FJÎHĖÅFJÎGĖÅFJÎFĖÅFJ΀ÅFJIÎÈÅFJIÎÈÅFJĬÎÈÅFJĬÎÈÅFJĬIÈÅFJĬIÈÅFJIÎÈÅFJIÎÈÅFJIÎÈÅFJI FJIÌÈÅFJIĨÈÅFJIÎÈÅFJIÎÈÅFJI]ÈÅFJGËÅFJGÌÈÅFJGÎÈÅFJGIÈÅFJGHĖÅFJGFËÅFJG€
FG Ĩ ÁÙÁÓ ¦^^âÁÙ¢	G€FIÈ\GE€ÎÈ\GE€IÈ\GE€HÈ\GE€FÈ\GE€EÈ\FJJJÈ\FJJÎÈ\FJJÎÈ\FJJÊ\FJJEÈ\FJJĒÈ\FJJĒÈ\FJ] FJÌÎÈ\FJÌFÈ\FJÌEÈ\FJĨÊ FJÎHÈ\FJÎÊ FJÎHÈ\FJÎÊ FJÎÈ\FJIÎÊ FJIÌÊ\FJIÎÊ FJIÌÊ FJHHÊ\FJHGÊ\FJHÊ\FJIÎÊ\FJG]Ê\FJGÎÊ\FJGÎÊ\FJGÎÊ\FJGÎÊ\FJGHÊ\FJGHÊ FJHHÊ\FJHGÊ\FJHÊ\FJHÊ FJHHÊ\FJHGÊ\FJHÊ\FJGÊ

<u>5XXfYgg`FYgYUfW\YX</u>	5XXfYgg`Bch`=XYbh]Z]YX`]b`FYgYUfW\`GcifWY
FGĨÁÙÁÙUVUÁÙV	G€FIÊAG€F€ÊAG€€IÊAG€€HÊAG€€FÊAG€€€ÊAFJJJÊAFJJÎÊAFJJÎÊAFJJÊAFJJFÊAFJJ€ÊAFJÎÊA FJÎÊAFJÎFÊAFJÎÊAFJÎÊAFJÎÎÊAFJÎÎÊAFJÎÊAFJ
FGĨÁÙUVUÁÙVÁÞ	G€FIÈAG€F€ÈAG€€ÎÈAG€€IÈAG€€HÈAG€€FÈAG€€EÀFJJJÈAFJJÎÈAFJJÎÈAFJJGÈAFJJFÈAFJJ€ÈAFJ FJÌÎÈAFJÌÊAFJÌEAFJÌÊAFJÏÎÈAFJÏÎÈAFJÏÎÈAFJÏËAFJÏÊAFJÏÊAFJÎÊAFJÎÎÈAFJÎÎÈAFJÎÎ FJÎIÊAFJÎHÊAFJÎGÊAFJÎÊAFJÎÊEAFJÎ FJIÌÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÊAFJIÊAFJIÊAFJIÊAFJIÎÊAFJÎÎÊAFJÎ FJHHÊAFJHGÊAFJHFÊAFJHÊÂFJGJÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGIÊAFJGHÊAFJGÊÂFJGÊ FJHHÊAFJHGÊAFJHFÊAFJHÊAFJGJÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGHÊAFJGÊAFJGÊ
FGĨÁÙUVUÁÙVÁÙ	G€FIÈIG€F€ÈIG€€ÎÈIG€€IÈIG€€HÈIG€€FÈIG€€EÈIFJJÈIFJJÎÈIFJJÎÈIFJJĜÌFJJËÌFJJËÌFJJËÌFJJËÌFJJËÌFJJËÌ FJÌÎÈIFJÌËİFJÌËİFJÌ€İFJÌ€İFJĨËİFJÏÎÈIFJÏÏËIFJÏÏË FJÎIÈIFJÎHİFJÎGİIFIÎËİFJ΀İFJÎ EIFJIÈIFJIÎÈIFJIÊİFJIÎÈIFJIÊİFJIĒİFJIÊİ FJIHĖIFJHGİIFJHĒİFJHĒÌFJGÈİFJGÌÈIFJGĨÈIFJGÎÊIFJGIÊIFJGHĖIFJGĒİ FJHHĖIFJHGİFJHĒÌFJH€ÌFJGĒÌFJGÌÈIFJGĨÈIFJGĨÊIFJGIÊIFJGHĖIFJGĒÌ
FGJÁÙÁÙUVU	G€FIÈAG€F€ÈAG€€ÎÈAG€€IÈAG€€EËAG€€EËAFJJÈAFJJÎÈAFJJÎÈAFJJGÈAFJJĒÀFJÌÎÈA FJÌÎÈAFJÌEÈAFJĨÊAFJĨÎÈAFJĨÎÈAFJĨGÈAFJĨEÈAFJÎJÈAFJÎÎÈAFJÎÎÈAFJÎÎÈAFJÎÎÈAFJÎÎÈAFJÎ FJÎHĖAFJÎGÈAFJÎEÈAFJÎÊÊAFJÎÎÈAFJIÎÈAFJIÎÊAFJÎÎÈAFJÎÎÈAFJÎÎÊAFJIÎÊAFJIÎÊ FJIÎÈAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJHÎÊAFJHÎÊAFJHIÊAFJHIÊAFJHHÊAFJHGÊ FJHEÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGÊÊAFJGEÊAFJG€
FGJÁÙÁÙUVUÁÙV	G€FIÈÅG€F€ÈÅG€€IÈÅG€€HÈÅG€€FÈÅG€€€ÈÅFJJJÈÅFJJÎÈÅFJJËÅFJJËÅFJJËÅFJJËÅFJJ€ÅFJ] FJÌÍÈÅFJÌFÈÅFJÌ€ÅFJÏÎÈÅFJÏÎÈÅFJĨËÅFJĨËÅFJĨËÅFJĨEÅFJĨEÅFJĨÈÅFJÎËÅFJĨÈÅFJĨÈÅFJĨÈÅ FJĨHĖÅFJĨGĖÅFJĨĒÅFJĨÊÅFJĨĨÈÅFJĨĨĖÅFJĨĨĖÅFJĨIĖÅFJĨIĖÅFJĨEÅFJĨEÅ FJIÌÈÅFJIĨÈÅFJIÎÈÅFJIÎĖÅFJĨEÅFJĨËÅFJIËÅFJJĨĖÅFJIÌÈÅFJHÌÈÅFJHĨÈÅFJHIÈÅFJHIÈ FJHHĖÅFJHGÅFJHFĖÅFJH€ÅFJGJĖÅFJGĨÈÅFJGĨĖÅFJGĨĖÅFJGIĖÅFJGIĖÅFJGHĖÅFJGFĖÅFJG€
FGJÁÙUVUÁÙVÁÞ	G€FIÈ&G€FEÈ&G€€ÎÈ&G€€IÈ&G€€EË&G€€EË&G€€EË&FJJEÅFJJÎÈ&FJJÎÈ&FJJË&FJJË&FJJË FJÌÎÈ&FJÌEÅFJÌEÅFJÌË FJÎIÊ&FJÎE&FJÌÊ FJÎIÊ&FJÎE FJIÎÊ FJIÎÊ FJHE FJHE FJHE FJHE FJHE FJHE FJHE FJHE
FGJÁÙUVUÁÙVÁÙ	G€FIÈIG€F€ÈIG€€ÎÈIG€€IÈIG€€HÈIG€€FÈIG€€EÈIFJJÈIFJJÎÈIFJJÎÈIFJJĜÈIFJJËÈIFJJËÈIFJJËÈIFJJËÈ FJÌÎÈIFJÌÉİFJÌËİFJÌ€ÈIFJÌ€ÈIFJĨËİFJÏËİFJÏËİFJÏËİFJÏËİFJÏËİFJÏË FJÎIÈIFJÎHÈIFJÎGÈIFJÎĒÈIFJ΀ÈIFJÎËİFJIËÈIFJIË FJIÌÈIFJIÎÈIFJIÎÈIFJIÊİFJIÊİFJIËÈIFJIËÌI FJHHÈIFJHGÈIFJHËÌIFJEÈIFJG]ÈIFJGÏÈIFJGĨÈIFJGÎÈIFJGIÊIFJGHÈIFJGË FJHHÈIFJHGÈIFJHËÌFJH€ÈIFJG]ÈIFJGÏÈIFJGĨÈIFJGÎÈIFJGIÊIFJGHÈIFJGË
FH€ÁÙÁÓ¦^^åÁÙc	G€F€ÅG€€ÎÊÅG€€IÊÅG€€HÊÅG€€FÅG€€€ÅFJJJÊÅFJJÎÊÅFJJÎÊÅFJJGÅFJJFÅFJJ€ÅFJ] FJÌÎÊÅFJÌFÅFJÌ€ÅFJÏÎÊÅFJÏÎÊÅFJÏGÅFJÏFÅFJĨEÅFJÎJÊÅFJÎÌÊÅFJÎÎÊÅFJÎÎ FJÎHÊÅFJÎGÊÅFJÎFÊÅFJÎÊÅFJIÎÊÅFJIÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎ FJIÌÊÅFJIÎÊÅFJIÎÊÅFJIÎÊÅFJI FJHHÊÅFJHGÅFJHFÊÅFJH€ÅFJGÊÅFJGÎÊÅFJGÎÊÅFJGÎÊÅFJGIÊÅFJGHÊÅFJGFÊ FJHHÊÅFJHGÊÅFJHFÊÅFJH€ÅFJGÊÅFJGÎÊÅFJGÎÊ
FH€ÁÙÁÓ¦^^åÁÙ¢	G€F€ÅG€€ÎÅG€€IÅG€€HÅG€€FÅG€€€ÅFJJJÅFJJÎÅFJJÍÅFJGÅFJJFÅFJJ€ÅFJ] FJÌÍÅFJÌFÅFJÌ€ÅFJÏÎÅFJĨÎÅFJĨGÅFJĨGÅFJĨFÅFJĨ€ÅFJĴJÅFJĴĨÅFJĴÎÅFJÌÎÅFJÎ FJÌHÅFJÎGÅFJÌFÅFJ΀ÅFJĨÎÅFJĨÎÅFJĨÎÅFJĬÎÅFJĬÎÅFJĬIÅFJĨGÅFJĨ FJIÌÅFJIĨÅFJIÎÅFJIÎ FJHHÅFJHGÅFJHFÅFJH€ÅFJGJÅFJGÌÅFJGĨÅFJGÎÅFJGIÅFJGHÅFJGHÅFJGFÅ FJHHÅFJHGÅFJHFÅFJH€ÅFJGJÅFJGÌÅFJGĨÅFJGĨÅFJGIÅ
FH€ÁÙÁÙU∨UÁÙV	G€FIÈÅG€F€ÈÅG€€IÈÅG€€HÈÅG€€FÈÅG€€€ÈÅFJJJÈÅFJJÊÅFJJÉÅFJJGÈÅFJJFÈÅFJJ€ÈÅFJÌÊÈÅ FJÌÍÈÅFJÌFÈÅFJÌ€ÅFJĨÉÅFJĨÖÈÅFJĨFÅFJĨ€ÅFJÎÈÅFJÎÌÈÅFJÎÌÈÅFJÌÊÅFJÌÈÅFJÌÈÅFJÌÈÅFJÌÈÅFJÌÈÅFJÌÈÅFJÌÈÅFJÌÈ
FH€ÁÙU∨UÁÙVÁÙ	G€FIÈÅG€F€ÈÅG€€ÎÈÅG€€IÈÅG€€HĖÅG€€FÈÅG€€EÅFJJJËÅFJJÎÈÅFJJÊÅFJJGÅÅFJJFÅFJJ€Å FJÌÎĖÅFJÌÉÅFJÌFÅFJÌ€ÅFJÏÎÈÅFJÏÍÈÅFJÏGÅFJÏFÅFJĨ€ÅFJĨEÅFJĴŬÅFJĴÌËÅFJĨÈÅFJÌÊÅ FJÎIÈÅFJÎHÅFJÎGÅFJÎFÅFJ΀ÅFJÎÎÈÅFJÎ FJIÌĖÅFJIĨĖÅFJIÎÉÅFJI FJIHĖÅFJHJÅFJIÎÉÅFJIIĖÅFJGÌËÅFJGÏÈÅFJGĨËÅFJGIËÅFJGIËÅFJGHĖÅFJGEÅ FJHHĖÅFJHGÅFJHFĖÅFJH€ÅFJGJĖÅFJGÌËÅFJGĨËÅFJGIËÅFJGIËÅFJGHĖÅFJGEÅ

<u>5XXfYgg`FYgYUfW\YX</u>	5XXfYgg`Bch`=XYbh]Z]YX`]b`FYgYUfW\`Gc i fWY
FHFÁÙÁÙUVU	G€FIÈÅG€FEÈÅG€€ÎÈÅG€€IÈÅG€€HĖÅG€€FËÅG€€EÅFJJJÈÅFJJÎÈÅFJJÎÈÅFJJGËÅFJJËÅFJJĒÅFJJĒÅ FJÌÍĖÅFJĨ€ÅFJĨÎÈÅFJĨÍËÅFJĨĞÅFJĨĞÅFJĨ€ÅFJÎĴĖÅFJÎÎËÅFJÎÌËÅFJÎÌËÅFJĨÌËÅFJĨËÅ FJÍÌĖÅFJĨĨËÅFJĨĨĖÅFJĨIĖÅFJĨIËÅFJĨĞÅFJĨĒÅFJĨĒÅFJIÌËÅFJIÌËÅFJIÌËÅFJIÌËÅFJIÌË FJIIËÅFJIEÅFJHÌËÅFJHÌËÅFJHĨËÅFJHĨËÅFJHIËÅFJHGÅFJHFËÅFJH€ÅFJGĨĖÅFJGĨËÅ FJGIÉÅFJGHĖÅFJGFĚ
FHFÁÙÁÙUVUÁÙV	G€FIÉAG€F€ÉAG€€IÉAG€€HÉAG€€FÉAG€€€ÅFJJJÉAFJJÎÉAFJJÉAFJJEÁFJJEÉAFJJ€ÉAFJÌÉ A FJÌÍÉAFJÌFÉAFJÌ€ÉAFJÏÎÉAFJÏGÉAFJÏĞÉAFJÏFÉAFJÏEÉAFJÎJÉAFJÎJÉAFJÎÎÉAFJÎ FJÎHÊAFJÎGÊAFJÎFÊAFJÎÊÊAFJĬÎÊAFJIÎÊAFJÎÊAFJÎEÂAFJÎ FJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJÎÊ FJHGÊAFJHFÊAFJHÊÊAFJGJÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGIÊAFJGHÊAFJGFÊAFJG€ FJHGÊAFJHFÊAFJHEÊAFJGJÊAFJGÎÊAFJGÎÊAFJGIÊAFJGIÊAFJGHÊAFJGFÊAFJG€
FHFÁÙUVUÁÙVÁÞ	G€FIÊAG€F€ÊAG€€ÎÊAG€€IÊAG€€HÊAG€€FÊAG€€ÊAFJJJÊAFJJÎÊAFJJÎÊAFJJGÊAFJJFÊAFJJEÊ FJÌÎÊAFJÌIÊAFJÌFÊAFJÌÊAFJÏÎÊAFJÏÎÊAFJÏGÊAFJÏÊAFJÎÊAFJÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊ FJÎIÊAFJÎHÊAFJÎGÊAFJÎFÊAFJ΀ÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎ FJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJAÎÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎÊ FJHHÊAFJHGÊAFJHFÊAFJH€ÊAFJGJÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGIÊAFJGIÊAFJGÊÊAFJG
FHFÁÙUVUÁÙVÁÙ	G€FIÈ&G€F€È&G€€ÎÈ&G€€IÈ&G€€EË&GE€EË&GE€EË&FJJDË&FJJÎÈ&FJJË&FJJË&FJJË FJÌÎÈ&FJÌEÅFJÌEË&FJÌÊ FJÎIÊ&FJÌÊ FJÎIÊ FJÎIÊ FJÎIÊ FJIÎÊ FJIÎÊ FJIÎÊ FJIÎÊ FJHE FJHE FJHE FJHE FJHE FJHE FJHE FJHE
FHGÁÙUVUÁÙVÁÞ	G€FIÈÅG€F€ÈÅG€€ÎÈÅG€€IÈÅG€€HÈÅG€€FËÅG€€EÅFJJJËÅFJJÎÈÅFJJÊÅFJJGĖÅFJJFÅFJJĒÅ FJÌÎĖÅFJÌEÅFJÌFÅFJÌEÅFJĨÊÅFJĨÎÈÅFJÏ[ËÅFJÏGÅFJÏËÅFJĴËÅFJĴJÈÅFJĴÈÅFJĨÈÅFJĨÈÅ FJÎIËÅFJÎHÅFJĴGÅFJÎEÅFJĨÊÅFJĨËÅFJĨËÅFJĨËÅFJĨËÅFJĨË FJIÌËÅFJIĨËÅFJIÎÊÅFJIÊÅFJI FJIIËÅFJIËÅFJIÎËÅFJIË FJHHÅFJHGÅFJHFËÅFJH€ÅFJGJËÅFJGĨËÅFJGĨËÅFJGĨËÅFJGIËÅFJGHÅFJGFËÅFJGE
FHIÁÙÁÙUVU	G€FIÊAG€F€ÊAG€€ÎÊAG€€IÊAG€€HÊAG€€FÊAG€€ÊAFJJÛÂFJJÎÊAFJJÊAFJJÊAFJJÊÂFJJÊÂFJ FJÌÎÊAFJÎFÊAFJ΀ÊAFJÏÎÊAFJÏÎÊAFJÏGÊAFJ΀ÊAFJÎJÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎ FJ΀ÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎ FJIÎÊAFJIIÊAFJIÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎ FJIÎÊAFJIÎÊAFJHÊAFJHJÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHIÊAFJHGÊAFJHFÊAFJH€ÊAFJGÎÊA FJGÎÊAFJGÎÊAFJGIÊAFJGÊÊAFJGE
FH I ÁÙÁÙU VU ÁŒXÒ	G€FIÉAG€F€ÉAG€€ÎÊAG€€IÊAG€€HÊAG€€FÊAG€€EÊAFJJJÊAFJJÎÊAFJJÎÊAFJJGÊAFJJFÊAFJJEÊ FJÌÎÊAFJÎFÊAFJ΀ÊAFJÏÎÊAFJÏÎÊAFJÏGÊAFJÏFÊAFJÎJÊAFJÎJÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊ FJÎHÊAFJÎGÊAFJÎFÊAFJÎÊÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÊÊAFJÎ FJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJÎÊÊAFJÎÊÊAFJAÎÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎÊ FJHHÊAFJHGÊAFJHFÊAFJH€ÊAFJGJÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGIÊAFJGIÊAFJGÊAFJG
FH Ι Α̈́ŪΑ̈́ŬU V UÄ́ÙV	G€FIÈÅG€F€ÈÅG€EIÈÅG€€HÈÅG€€FÈÅG€€EÅFJJJÈÅFJJÎÈÅFJJÎÈÅFJJEÅFJJEÅFJJ€ÅFJJÈÅFJÌÈÅ FJÌİÈÅFJÌFÅFJÌ€ÅFJÏEÅFJÏGÈÅFJÏFÈÅFJÏ€ÅFJÎJÈÅFJÎÌÈÅFJÎÈÅFJÌÈÅFJÌÈÅFJÌ FJÌGÅFJÌFÅFJÌ€ÅFJİÊÅFJĬÎÈÅFJİÎÈÅFJIÎÈÅFJI FJIÎÊÅFJIİÊÅFJIEÅFJI€ÅFJIËÅFJHËÅFJHÌËÅFJHÏÊÅFJHËÅFJHEÅFJHEÅ FJHFÅFJH€ÅFJGĴÊÅFJGÌÈÅFJGĨËÅFJGĨÊÅFJGIÊÅFJGEÅFJGFËÅFJG€
FΗ Ι Α̈́ŬŪVUÄ́ŬVĂÞ	G€FIÈ\G€F€È\G€€ÎÈ\G€€IÈ\G€€HÈ\G€€FÈ\G€€EÈ\FJJÈ\FJJÎÈ\FJJÎÈ\FJJÊÈ\FJJËÈ\FJJËÈ\FJJËÈ FJÌÎÈ\FJÌÎÈ\FJÌËÈ\FJÌÊ FJÎIÊ\FJÎHÊ\FJÎÊ FJÎIÊ\FJÎHÊ\FJÎÊ FJIÎÊ\FJIÎÊ FJIÎÊ FJHHÊ\FJHÊ\FJIÎÊ\FJIÎÊ FJHHÊ\FJHGÊ\FJHË NGÊ\FJGÊ FJHHÊ\FJHGÊ\FJHË NGÊ\FJGÊ NGÊ FJHHÊ\FJHGÊ\FJHË NGÊ FJHHÊ\FJHGÊ\FJHÊ NGÊ SE SE SE SE SE SE SE SE SE SE SE SE SE
FH Ι Α̈́ŬŪVU Ä́ŬVÄ́Ù	G€FIÈ&G€FEÈ&G€€ÎÈ&G€€IÈ&G€€EË&GE€EË&GE&EË&FJJË&FJJÎË&FJJË&FJJË&FJJË FJÌÎË&FJÌË&FJÌEË&FJÌÊ FJÎIË&FJÎE&FJÌÊ FJÎIË FJÎIË FJIÎË FJIÎË FJIÎË FJHË FJHË FJHË FJHË FJHË FJHË FJHË FJH
FH Í ÁFÐGÁÙÁÙUVU	G€FIÈÅG€F€ËÅG€€ÎÈÅG€€IËÅG€€HËÅG€€FËÅG€€ËÅFJJJËÅFJJĨËÅFJJĨËÅFJJGËÅFJJFÅFJÌË FJÌIËÅFJÌFËÅFJÌ€ÅFJÏÎËÅFJÏIËÅFJÏGËÅFJÏFËÅFJÏEÅFJÎJËÅFJÎIËÅFJÎIË FJÎHËAFJÎGËÅFJÎFËÅFJÏÊÅFJIÎËÅFJĨIË FJÎHËAFJIGËÅFJÎFËÅFJIÊ AFJIIË FJHHËAFJHGËÅFJHFËÅFJHË AFJGIËÅFJGIËÅFJGJËÅFJGJË AFJGIË

<u>5XXfYgg`FYgYUfW\YX</u>	5XXfYgg`Bch`=XYbh]Z]YX`]b`FYgYUfW\`Gc i fWY
FHÍÁÙÁÙUVU	G€FIÈAG€F€ÈAG€€ÎÈAG€€IÈAG€€EÈAG€€EÈAG€€EÈAFJJDÈAFJJÎÈAFJJÎÈAFJJGÈAFJJFÈAFJJ€È FJÌÎÈAFJÌÉAFJÏÈAFJÏÎÈAFJÏÎÈAFJÏGÈAFJÏFÈAFJÏEÈAFJÎDÈAFJÎÌÈAFJÎÎÈAFJÎIÈAFJÎIÈAFJÎ FJÎFÈAFJ΀ÈAFJÎÌÈAFJIÎÈAFJIÎÈAFJIÎÈAFJIÎÈAFJÎ FJIÎÊAFJIÎÊAFJIIÊAFJI FJGĨËAFJGÎÊAFJGÎÊAFJGEÂFJG€
FHÍÁÙÁÙUVUÁÙV	G€FIÈAG€F€ÈAG€€IÈAG€€HÈAG€€FÈAG€€EÅFJJJÈAFJJÎÈAFJJÎÈAFJJGÈAFJJFÈAFJJ€ÈAFJÌÈ Å FJÌÎÉAFJÌFÈAFJÌÊAFJÏÎÈAFJÏÎÈAFJÏGÈAFJÏFÈAFJÎEÀAFJÎEÀAFJÎÈAFJÎÊAFJÎÎÈAFJÎÎÈAFJÎÎÈA FJÎHÊAFJÎGÊAFJÎFÊAFJÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎGÊAFJÎFÊAFJÎÊ FJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊA FJHGÊAFJHFÊAFJHÊÂFJGIÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGIÊAFJGHÊAFJGFÊAFJG€ FJHGÊAFJHFÊAFJHÊÂFJGÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGIÊAFJGIÊAFJGFÊAFJG€
FΗ Ι ÅÙÅÙ [c[ÅÙc	G€€ÎÊAG€€IÊAG€€HÊAG€€FÊAG€€€ÅFJJJÊÅFJJÎÊAFJJÎÊAFJJÊÅFJJÊÅFJJÊÊAFJÌÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJIÎÊAFJÎÎÎÊAFJÎÎÎÊAFJÎÎÎÊAFJÎÎÎÊAFJÎÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÎÊAFJÎÎÎÊAFJÎÎÎÎ
FH Í ÁÙÁÙ [c[ÁÙc	G€€ÎÊÅG€€IÊÅG€€FÊÅG€€FÊÅG€€EÅFJJJÊÅFJJÎÊÅFJJÎÊÅFJJÊÅFJJĒÅFJJĒÅFJÌÎÊÅFJÌÎÊÅFJÌÎÊ FJÌFÊÅFJÌ€ÅFJÏÎÊÅFJÏÎÊÅFJÏGÊÅFJÏFÊÅFJÏ€ÅFJÎJÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎ FJÎGÊÅFJÎFÊÅFJ΀ÅFJIÎÊÅFJIÎÊÅFJIÎÊÅFJIÎÊÅFJIÎÊÅFJIÎÊÅFJIÎÊÅFJIÎÊÅFJI FJIÎÊÅFJIÎÊÅFJIÎÊÅFJIÎÊÅFJIÎÊÅFJIÊÅFJGÎÊÅFJGÎÊÅFJGÎÊÅFJGÊÅFJGÊÅFJG FJHGÊÅFJHFÊÅFJH€ÅFJGJÊÅFJGÎÊÅFJGÎÊÅFJGÎÊÅFJGIÊÅFJGÊÅFJGÊÅFJG
FHÍÁÙUVUÁÙVÁÙ	G€FIÈÅG€F€ÈÅG€€ÎÈÅG€€IÈÅG€€HÈÅG€€FËÅG€€ËÅFJJJËÅFJJÎÈÅFJJÊÅFJJGĖÅFJJFÅFJJĒÅ FJÌÎĖÅFJÌÉÅFJÌFÅFJÌ€ÅFJĨÈÅFJĨİÈÅFJĨGÅFJÏFÅFJÏEÅFJĨEÅFJĴJÈÅFJÎËÅFJĨÈÅFJĨÈÅ FJÎIĖÅFJÎHÅÆJĴGÅFJÎFÅFJ΀ÅFJĨĖÅFJĨĖÅFJĨĖÅFJĨËÅFJĨËÅFJĨEÅFJĨEÅFJĨĖÅ FJIÌĖÅFJIĨĖÅFJIÎĖÅFJIÊÅFJI FJIHĖÅFJHGÅFJHFÅFJH€ÅFJGJĖÅFJGÌËÅFJGĨĖÅFJGĨĖÅFJGIĖÅFJGHÅFJGFÅFJGFĚ FJHHĖÅFJHGÅFJHFÅFJH€ÅFJGJĖÅFJGÌË
FHĨÁÙÁÙUVU	G€FIÈ&G€F€È&G€€ÎÈ&G€€IÈ&G€€EË&GE€EË&GE€EË&GEGEË&GE&EË&FJJË&FJJÎË&FJJË&FJJË&FJJË FJÌÎË&FJĨ€&FJĨÎË&FJĨÎË FJÎÎË&FJÎÎË&FJĨÎË FJĨÎË&FJĨÎË FJĨIË FJĨIË FJĨIË FJGÎË&FJGHË&FJGFË FJGË FJGË
FHĨÁÙÁÙUVUÁÙV	G€FIÈAG€F€ÈAG€€IÈAG€€HÈAG€€FÈAG€€EÅFJJJÈAFJJÎÈAFJJÎÈAFJJGÈAFJJFÈAFJJ€ÈAFJÌÈ Å FJÌÎÉAFJÌFÈAFJÌ€ÈAFJÏ[ÈAFJÏGÈAFJÏFÈAFJÏ€ÈAFJÎJÈAFJÎÏÈAFJÎÎÈAFJÎ FJÎGÈAFJÎFÈAFJ΀ÈAFJÏÎÈAFJÏÎÈAFJÎÎÈAFJÎÎÈAFJÎÎÈAFJÎ FJIÎÊAFJIÎÊAFJI]ÊAFJIĞÈAFJIÊAFJHÌÈAFJHÌÈAFJHÏÊAFJHÊAFJHIÈAFJHHÈAFJHHÈAFJHGÈ FJHFÈAFJH€ÈAFJGJÈAFJGÌÈAFJGĨÈAFJGÎÊAFJGIÊAFJGHÈAFJGFÈAFJG€
FHĨÁÙUVUÁÙVÁÙ	G€FIÈ&G€FEÈ&G€€ÎÈ&G€€IÈ&G€€EË&GE€EË&GE€EË&GEUEJJË&FJJÎË&FJJË&FJJË FJÌÎË&FJÌIË&FJÌE FJÌIË&FJÌIË&FJÌE FJÎIË FJÎIË FJIIË FJIIË FJIIË FJHE FJHE FJHE FJHE FJHE FJHE FJHE FJHE
FΗΪ ÅÙÅÙUVUÂÙV	G€FIÈÅG€F€ÈÅG€€IÈÅG€€FÈÅG€€EÅFJJJÈÅFJJÎÈÅFJJÎÈÅFJJEÅFJJEÅFJJ€ÅFJJ€ÅFJ] FJÌİÈÅFJÌFÅFJÌ€ÅFJÏÊÅFJÏİÈÅFJÏGÅFJÏFÅFJÏEÅFJĴIÈÅFJÎÈÅFJÎJÈÅFJÌÈÅFJÌÈÅFJÌ FJÌHĖÅFJÎGÅFJÌFÈÅFJ΀ÅFJIÎÈÅFJIÎÈÅFJIİÈÅFJIİÊÅFJI FJIÏÈÅFJIÎÊÅFJIİÊÅFJI FJHGÅFJHFÅFJH€ÅFJGEÅFJGÌÈÅFJGĨÈÅFJGÎÊÅFJGIÊÅFJGIÊÅFJGFÅFJG€
FΗΪ ÅÙUVUÁÙVÅÞ	G€FIÈÅG€F€ÈÅG€€ÎÈÅG€€IÈÅG€€HÈÅG€€FÈÅG€€€ÅFJJJÈÅFJJÎÈÅFJJÊÅFJJGÈÅFJJFÅFJJ€ÈÅ FJÌÎĖÅFJÌÉÅFJÌFÅFJÌ€ÅFJÏÎÈÅFJÏÍÈÅFJÏGÅFJÏFÅFJĨ€ÅFJĴEÅFJĴÌÈÅFJĨÈÅFJĨÈÅFJÎ FJÎIÈÅFJĨHÅFJÎGÅFJÎFÅFJ΀ÅFJÎÎÈÅFJĨËÅFJĨËÅFJĨËÅFJĨEÅFJĨEÅFJĨEÅFJĨÈÅFJ FJIÌÈÅFJIĨÈÅFJIÎÈÅFJIÎÈÅFJI FJHHĖÅFJHGÅFJHFÅFJH€ÅFJGJĖÅFJGÌÊÅFJGĨËÅFJGĨÈÅFJGIÊÅFJGHÅFJGFÅFJGĒ
FΗΪ ÅÙUVUÁÙVÅÙ	G€FIÉÅG€F€ÉÅG€€ÎÉÅG€€IÉÅG€€HÉÅG€€FÉÅG€€EÅFJJJÉÅFJJÎÉÅFJJÉÅFJJGÉÅFJJFÅFJJ€ÉÅ FJÌÎÉÅFJÌÉÅFJÌFÅFJÌ€ÅFJÏÉÅFJĨÍÉÅFJÏGÅFJÏFÅFJÏ€ÅFJÏEÅFJĴJÉÅFJĴĬÉÅFJĨÉÅFJÌ FJÎIÉÅFJÎHÅFJÎGÅFJÎFÅFJ΀ÅFJIÎÉÅFJĨÉÅFJĬËÅFJĬÎ FJIÌÉÅFJIĨÉÅFJIÎÉÅFJIÊÅFJI FJHHÅFJHGÅFJHFÅFJH€ÅFJGJÉÅFJGĨÉÅFJGĨÉÅFJGÎÉÅFJGIÊÅFJGHÅFJGHÉÅFJGFÅFJG€

<u>5XXfYgg`FYgYUfW\YX</u>	5XXfYgg`Bch`=XYbh]Z]YX`]b`FYgYUfW\`Gc i fWY
FHÌÀÙUVUÁÙVÁÞ	G€FIÈÅG€F€ÈÅG€€ÎÈÅG€€IÈÅG€€HĖÅG€€FĖÅG€€EÅFJJÈÅFJJÎÈÅFJJÎÈÅFJJGÅFJJFÅFJJ€Å FJÌÎĖÅFJÌÉÅFJÌEÅFJÌ€ÅFJĬÎÈÅFJĬÎÈÅFJĬGÅFJĬGÅFJĬËÅFJĬËÅFJÎÈÅFJÎÈÅFJÎÈÅFJÎÈÅFJÎ FJÎIÈÅFJÎHÅFJÎGÅFJÎÊÅFJIÊÅFJI FJIÌÊÅFJIÎĖÅFJIÎÊÅFJIÊÅFJI FJIHĖÅFJHGÅFJHFÅFJH€ÅFJGJÊÅFJGÌÊÅFJGÎÊÅFJGÎÊÅFJGIÊÅFJGHÅFJGFÅFJG€ FJHHÅFJHGÅFJHFÅFJH€ÅFJGJÊÅFJGĴÊÅFJGĨÊÅFJGÎÊÅFJGIÊÅFJGHÅFJGHÉÅFJG
FHJÁÙÁÙUVUÁÙV	G€FIÉAG€F€ÉAG€€ÎÊAG€€IÊAG€€HÊAG€€FÊAG€€EÊAFJJJÊAFJJÎÊAFJJÎÊAFJJGÊAFJJFÊAFJJ€Ê FJÌÎÊAFJÌÊAFJÌFÊAFJÌÊAFJÏÎÊAFJÏÎÊAFJÏGÊAFJÏÊAFJÎÊAFJÎÊAFJÎÊAFJÎÊ FJÎIÊAFJÎHÊAFJÎGÊAFJÎÊAFJÎÊAFJÎÊAFJÎÊAFJÎÊAFJÎÊAFJÎÊAFJÎ
FHJÁÙUVUÁÙVÁÙ	G€FIÉAG€F€ÉAG€€ÎÊAG€€IÊAG€€HÊAG€€FÊAG€€EÊAFJJJÊAFJJÎÊAFJJÎÊAFJJGÊAFJJFÊAFJJ€Ê FJÌÎÊAFJÌÊAFJÌFÊAFJÌÊAFJÏÎÊAFJÏÎÊAFJÏGÊAFJÏÊAFJÎÊAFJÎÊAFJÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊA FJÎIÊAFJÎHÊAFJÎGÊAFJÎÊAFJÎÊAFJÎÊEAFJÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎ FJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJAÎÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎÊA FJHHÊAFJHGÊAFJHFÊAFJH€ÊAFJGJÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGIÊAFJGHÊAFJGÊAFJGÊ
FI€ÁÙÁÙU∨U	G€FIÉAG€F€ÉAG€€ÎÉAG€€IÉAG€€HÉAG€€FÉAG€€EÊAFJJÉAFJJÎÊAFJJÎÉAFJJÊAFJJÊÂFJJÊÂFJJÊÊAFJÌÊ FJÌÎÉAFJÌFÊAFJÌÊÊAFJÏÎÊAFJĬÎÊAFJÏÎÊAFJÏÊÊAFJÎÊÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎ FJ΀ÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎ FJÎÊÊAFJIÎÊAFJIÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊA FJIÎÊAFJIIÊAFJHÊAFJHJÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHIÊAFJHEÊAFJH€ÊAFJGÎÊA FJGÎÊAFJGÎÊAFJGHÊAFJGFÊAFJG€
FI€ÁÙÁÙU∨UÁÙV	G€FIÈÅG€F€ÈÅG€€IÈÅG€€HÈÅG€€FÈÅG€€€ÅFJJJÈÅFJJÎÈÅFJJÎÈÅFJJËÅFJJËÅFJJ€ÅFJ] FJÌÎÈÅFJÌFÈÅFJÌ€ÅFJÏİÈÅFJÏËÅFJÏFÈÅFJÏFÈÅFJÏĴÈÅFJÎÌÈÅFJÎÎÈÅFJÎÎÈÅFJÎÎÈÅFJ] FJÎGÊÅFJÎFÈÅFJĨ€ÅFJÏÎÈÅFJĨÎÈÅFJĨÌÈÅFJÏÎÊÅFJIÎÊÅFJÎÎËÅFJÎ FJIÎÊÅFJIÎÊÅFJIIÊÅFJIĞÅFJI FJIÎÊÅFJIÎÊÅFJIIÊÅFJIĞÅFJI FJHFÅFJHÊÅFJGJÊÅFJGÌÊÅFJGĨÊÅFJGÎÊÅFJGIÊÅFJGIÊÅFJGFÊÅFJG€
FI€ÁÙU∨UÁÙVÁÙ	G€FIÊAG€F€ÊAG€€ÎÊAG€€IÊAG€€HÊAG€€FÊAG€€ÊAFJJÊAFJJÎÊAFJJÎÊAFJJÊAFJJÊÂFJJÊÂFJJÊÂFJJÊÂFJJÊÊ FJÎÎÊAFJÎÊAFJÎFÊAFJÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÊÊAFJÎÊÊAFJÎÊÊAFJÎÊAFJÎ
FIFÁÙÁÙUVU	G€FIÉAG€F€ÉAG€€ÎÊAG€€IÊAG€€HÊAG€€FÊAG€€EÊAFJJJÊAFJJÎÊAFJJÊAFJJGÊAFJJFÊAFJJ€Ê FJÌÎÊAFJÌÎÊAFJÎ}ÊAFJÏÎÊAFJÏÎÊAFJÏGÊAFJÏÊÊAFJÎJÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎ FJ΀ÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎ FJÎÊAFJIÎÊAFJIÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊA FJIÎÊAFJIIÊAFJHÊAFJHJÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHIÊAFJHGÊAFJHFÊAFJH€ÊAFJGÎÊA FJGÎÊAFJGÎÊAFJGHÊAFJGFÊAFJG€
FIFÁÙÁÙUVUÁÙV	G€FIÈIG€F€ÈIG€€IÈIG€€HÈIG€€FÈIG€€€ÈIFJJJÈIFJJÎÈIFJJÎÈIFJJEÈIFJJEÈIFJJ€ÈIFJJ€ÈIFJ] FJÌÎÈIFJÌFÈIFJÌ€ÈIFJÏÊÈIFJÏÊÈIFJÏÊÈIFJÏÊÈIFJÎJÈIFJÎÈIFJÎËÈIFJÎËÈIFJÌÊÈIFJÌÈIFJÌÈIFJÌÈIFJÌÈIFJÌÈIFJÌÈ FJÎÊÊIFJÎÊÈIFJIÊÈIFJIÊÈIFJÎÊÈIFJIÎÈIFJIÎÈIFJIÎÈIFJIÊÈIFJIÊÈIFJIÊÈIFJIÈIFJIÈ FJIÊÈIFJIÎÊIFJIÊÈIFJGÈIFJGËÈIFJGÎÈIFJGÎÈIFJGÎÈIFJGIÊIFJGEÊIFJG€
FIFÁÙUVUÁÙVÁÙ	G€FIÈ&G€F€È&G€€ÎÈ&G€€IÈ&G€€FÈ&GE€EÈ&GE€EÈ&FJJÈ&FJJÎÈ&FJJÎÈ&FJJÊ&FJJÊ&FJJÊ FJÌÎÈ&FJÌÊ&FJÌÊ&FJÌÊ&FJÌÊ FJÎIÊ&FJÎÊ&FJÌÊ&FJÌÊ FJÎIÊ&FJÎÊ FJIÌÊ FJIÎÊ FJIÎÊ FJHÊ&FJHÊ&FJIÊ E FJHÊ&FJHÊ&FJHÊ FJHÊ FJHÊ FJHÊ FJHÊ FJHÊ FJHÊ FJHÊ
FIGÁÙUVUÁÙVÁÞ	G€FIÈAG€F€ÈAG€€ÎÈAG€€IÈAG€€EÈAG€€EÈAFJJÈAFJJÎÈAFJJÎÈAFJJGÈAFJJĒÀFJJĒÈA FJÌÎÈAFJÌIÉAFJÌEÈAFJÌ€ÈAFJĨÎÈAFJĨIÊAFJĨGÈAFJĨĒÈAFJĨĒÈAFJĨŬÈAFJĨĬÈAFJÎÎÈAFJÎÎÈAFJÎ FJÎIÈAFJÎHÊAFJÎGÈAFJÎEAFJ΀ÊAFJÎÎÈAFJIÎÈAFJÎÎÈAFJIÎÈAFJIÎÊAFJIÎÊAFJIÎ FJIÌÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÊAFJIÎÊAFJIÎÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎÊA FJHHÊAFJHGÊAFJHFÊAFJH€ÊAFJGJÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGIÊAFJGHÊAFJGÊÂFJGÊ
FΙΙÂÙUVUÂÙVÅÞ	G€FIÈkG€F€ÈkG€€ÎÈkG€€IÈkG€€FÈkG€€EÈkFJJÈkFJJÎÈkFJJÎÈkFJJGÈkFJJĒÈkFJJĒÈ FJÌÎÈkFJÌÉkFJÌEÈkFJÌÊÈkFJĨÎÈkFJĨÍÈkFJĨËÈkFJĨĒÈkFJĨĒÈkFJĨĬÈkFJĨĬÈkFJÎÎÈkFJÎÎÈ FJÎIÈkFJÎHÈkFJÎGÈkFJÎEÈkFJÎÊÈkFJIÊÈkFJIÎÈkFJÎÎÈkFJĨÎÈkFJĨÎÈkFJIÎÈ FJIÌÈkFJIĨÈkFJIÎÈkFJIÎÈkFJIÎÈkFJIÊÈKFJHJÈKFJHÌÈKFJHÎÈKFJHÎÈKFJHÎÈ FJHHÈKFJHGÈKFJHEÈKFJGJÈKFJGÌÈKFJGĨÈKFJGÎÊKFJGIÊKFJGHÈKFJGHÈ
<u>5XXfYgg`FYgYUfW\YX</u>	5XXfYgg`Bch`=XYbh]Z]YX`]b`FYgYUfW\`GcifWY
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FI Ι ΑὐΑὐυνυΑὐν	G€FIÊAG€F€ÊAG€€IÊAG€€HÊAG€€FÊAG€€ÊAFJJJÊAFJJÎÊAFJJÎÊAFJJÊAFJJÊÊAFJJÊÊAFJJÊÊAFJÎÊ Â FJÎÎÊAFJÎFÊAFJÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎFÊAFJÎFÊAFJÎÊAFJÎ
FΙ Ι ΑὐυνυΑὐνΑὐ	G€FIÈAG€F€ÈAG€€ÎÈAG€€IÈAG€€HÈAG€€FÈAG€€EÀFJJJÈAFJJÎÈAFJJÎÈAFJJGÈAFJJFÈAFJJ€ÈAFJ FJÌÎÈAFJÌÊAFJÌEAFJÌÊAFJÏÎÈAFJÏÎÈAFJÏÎÈAFJÏËAFJÏÊAFJÏÊAFJÎÊAFJÎÎÈAFJÎÎÈAFJÎÎ FJÎIÊAFJÎHÊAFJÎGÊAFJÎÊAFJÎÊEAFJÎ FJIÌÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÊAFJIÊAFJIÊAFJIÊAFJIÎÊAFJÎÎÊAFJÎ FJHHÊAFJHGÊAFJHFÊAFJHÊÂFJGJÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGIÊAFJGHÊAFJGÊÂFJGÊ FJHHÊAFJHGÊAFJHFÊAFJHÊAFJGJÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGHÊAFJGÊAFJGÊ
FΙ Ϊ Α̈́ÙUVUÄ́ÙVÁÞ	G€FIÈAG€FEÈAG€€ÎÈAG€€IÈAG€€EÈAG€€EÈAFJJÈAFJJÎÈAFJJÎÈAFJJGÈAFJJEÀFJJÊÀFJJËÀFJ FJÌÎÈAFJÌÉÀFJÌEÀFJÌ€ÀFJĨÊAFJĨÎÈAFJĨGÈAFJĨEÀFJĨÊAFJĨÊAFJĨÈAFJĨÈAFJĨÈAFJÎ FJÎIÈAFJÎHÈAFJÎGÈAFJÎEAFJ΀AFJÎÎÈAFJÎÎÈAFJÎÎÈAFJÎÎÈAFJÎÎÊAFJÎÎÊAFJIÎ FJIÌÈAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÊAFJIÎÊAFJAÎÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎ FJHHÊAFJHGÊAFJHFÊAFJH€ÂFJGJÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGIÊAFJGHÊAFJGÊAFJGÊ
FÍ€ÀÙU∨UÀÙVÅÞ	G€FIÈAG€FEÈAG€€ÎÈAG€€IÈAG€€EËAG€€EËAG€GEÈAFJJÈÀFJJÎÈAFJJÎÈAFJJËÀFJJËÀFJJËÀFJJËÀFJJËÈA FJÌÎÈAFJĨÉÀFJÌËÀFJÌÊÈAFJĨÊÀFJĨÎÈAFJĨËÅFJĨËÅFJĨËÅFJĨËÅFJĨËÅFJĨĨÈAFJĨËÅFJĨË FJÎIÈAFJĨHĖAFJÎGĖAFJÎĒÈAFJĨËÅFJĨËÅFJĨĨĖAFJĨĨĖAFJĨĨĖAFJĨĨĖAFJĨ FJIÌÈAFJIĨĖAFJIÎÈAFJIÎĖAFJI FJHHĖAFJHGÈAFJHĒÀFJHĒÈAFJGJĖAFJGĨÈAFJGĨĖAFJGĨĖAFJGIĖAFJGHĖAFJGĒĖAFJG€
FÍ€ÅÙU∨UÅÙVÅÙ	G€FIÈÅG€F€ÈÅG€€ÎÈÅG€€IÈÅG€€HĖÅG€€FÈÅG€€EÈÅFJJÈÅFJJĨÈÅFJJĨÈÅFJJGÅFJJFÈÅFJJ€Å FJÌĨÈÅFJĨÉÅFJĨEÅFJĨ€ÅFJĨĨÈÅFJĨĨÉÅFJĨGÅFJĨFÅFJĨËÅFJĨĨÈÅFJĨĨÈÅFJĨĨÈÅFJĨĨÈÅFJĨ FJĨIÈÅFJĨHĖÅFJĨGĖÅFJĨEÅFJĨ FJIÌÈÅFJIĨÈÅFJIÎÈÅFJI FJHHĖÅFJHGÅFJHFĖÅFJGEÅFJGJÈÅFJGĨÈÅFJGĨĖÅFJGĨĖÅFJGIĖÅFJGHĖÅFJGFĖÅFJG€
FÍ Ι Α̈́ŬUVUÄ́ÙVÄ́Ù	G€FIÈ&G€F€Ê&G€€ÎÈ&G€€IÈ&G€€EË&G€€EË&GE&EË&FE&GE&EË&FEJJË&FJJÎË&FJJÎË&FJJË&FJJË&FJJË FJÌÎË&FJÌË&FJÌË&FJÌË FJÎIË&FJÎHË&FJÎGË&FJÎË FJÎIË FJIÌË FJIIË FJHHË&FJHË&FJIÎË FJHHË&FJHGË&FJHË &FJHHË&FJHGË&FJGË FJHHË FJHHË
FÍÎÂÙUVUÂÙVÂÙ	G€FIÈIG€F€ÈIG€€ÎÈIG€€IÈIG€€HÈIG€€FÈIG€€EÈIFJJÈIFJJÎÈIFJJÎÈIFJJĜÈIFJJËÈIFJJËÈIFJJËÈIFJJËÈ FJÌÎÈIFJÌÉİFJÌËİFJÌËÈIFJÌ€ÈIFJĨËİFJÏËİIFJÏËİFJÏËÈIFJÏËÈIFJĬËÈIFJÌËÈIFJÌË FJÎIÈIFJÎHÈIFJÎÊİFJÌËÈIFJÎËEITÎË FJIÌÈIFJIÏÈIFJIÎÈIFJIÊİFJIËÈIFJIËÈIFJIËÌIË FJHHÈIFJHEİIFJHËÌFJHËÌFJGJÈIFJGÌÈIFJGĨÈIFJGÎÈIFJGIÊIFJGIËIFJGHÈIFJGËI FJHHÈIFJHEÌIFJHËÌFJH€ÌFJGJÈIFJGÌÈIFJGĨÈIFJGÎÈIFJGIÊIFJGIÊIFJGHÈIFJGË
FĨFÁÙÁÙUVUÁÙV	G€FIÈAG€F€ÈAG€€ÎÈAG€€IÈAG€€HÈAG€€FÈAG€€EÈAFJJÈAFJJÎÈAFJJÎÈAFJJGÈAFJJEÀFJJÊÀFJJÊ FJÌÎÈAFJÌÎÈAFJÌEÀFJÌÊAFJÏÎÈAFJÏGÈAFJÏFÈAFJÎEÀAFJÎÌÈAFJÎÎÈAFJÎÎÈAFJÎÎÈAFJÎÎÈAFJÎ FJÎHÊAFJÎGÊAFJÎFÊAFJ΀ÊAFJÎÎÊAFJIÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJIÎÊAFJIÎÊ FJIÌÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÊÊAFJAJÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎÊA FJHHÊAFJHGÊAFJHFÊAFJH€ÊAFJGÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGHÊAFJGÊÊ
GH€€ÀÒÁF∙cÀÙc	G€€ÎÊXG€€IÊXG€€EHÊXG€€EÊXGE€€ÊKFJJJÊXFJJÎÊXFJJÎÊXFJJÊÊXFJJÊÊXFJJÊÊXFJÌÎÊXFJÌÎÊXFJÌÎÊ FJÎÊÊXFJ΀ÊXFJÎÎÊXFJÎÎÊXFJÎÎÊXFJÎÊÊXFJÎÊXFJÎÎÊXFJÎÎÊXFJÎÎÊXFJÎÎÊXFJÎÎÊ FJÎÊÊXFJÎÊÊXFJÎÊÊXFJÎÎÊXFJÎÎÊXFJÎÎÊXFJÎÎÊXFJÎÊXFJ
GH€€ÀÒÅF∙cÀÙc	G€€ÎÊÅG€€IÊÅG€€HÊÅG€€FÊÅG€€EÅFJJJÊÅFJJÎÊÅFJJÎÊÅFJJÊÅFJJEÅFJJEÅFJ] FJÌFËÅFJÌ€ÅFJÏÎÊÅFJÏÎÊÅFJÏGÊÅFJÏFËÅFJÏÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎ FJÎGËÅFJÎÊÅFJÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÊÅFJ
GH€GÁÒÁFÙ∨	G€FIÈAG€F€ÈAG€€ÎÈAG€€IÈAG€€EËAG€€EËAFJJÈAFJJÎÈAFJJÎÈAFJJGÈAFJJËÀFJ]ÎÈA FJÌ€ÈAFJĨÎÈAFJĨIÈAFJĨGÈAFJĨ€ÈAFJÎJÈAFJÎĨÈAFJÎÎÈAFJÎÎÈAFJÎÎÈAFJÎ FJÎÌÈAFJÎÎÈAFJÎÎÈAFJÎÎÈAFJÎGÈAFJÎGÈAFJÎEÀFJIÎÈAFJI]ÈAFJIÎÈAFJIÎÈAFJIÎÈAFJIÎ FJIIÊAFJI€ÈAFJHJÈAFJHÌÈAFJHÎÊAFJHIÊAFJHIÊAFJHHÊAFJHGÊAFJHFÊAFJH€ÈAFJGÌÈA FJGÎÊAFJGÎÊAFJGEÂAFJG€Ê

<u>5XXfYgg`FYgYUfW\YX</u>	5XXfYgg`Bch`=XYbh]Z]YX`]b`FYgYUfW\`Gc i fWY
GH€GÁÒÁFÙVÁÙV	G€FIÈAG€FEÈAG€€IÈAG€€HÈAG€€FÈAG€€EÈAFJJJÈAFJJÎÈAFJJÎÈAFJJEÀFJJEÀFJJÊÀFJJÊÀFJ]ÎÈA FJÌÎÉAFJÌFÈAFJÌ€ÀFJÏÎÈAFJÏÎÈAFJÏGÈAFJÏFÈAFJÏEÀAFJÎJÈAFJÎÎÈAFJÎÎÈAFJÎÎÈAFJÎÎÈAFJÎ FJÎGÊAFJÎFÊAFJ΀ÀFJIÎÈAFJIÎÈAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJÎÊAFJIÎÊAFJIÎÊA FJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJI FJIÎÊAFJIÎÊAFJIÎÊAFJI FJHEAFJH€ÀFJGĴÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGIÊAFJGEÊAFJG€
GH€HÁÒÁFÙVÁÙV	G€FIÈAG€F€ÈAG€€ÎÈAG€€IÈAG€€HÈAG€€FÈAG€€EÀFJJJÈAFJJÎÈAFJJÎÈAFJJGÈAFJJFÈAFJJ€ÈAFJ FJÌÎÈAFJÌÊAFJÌEAFJÌÊAFJÏÎÈAFJÏÎÈAFJÏGÈAFJÏËAFJÏÊAFJÏÊAFJÎÊAFJÎÊAFJÎÊAFJÎ FJÎHÊAFJÎGÊAFJÎFÊAFJÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÊAFJ
GH€IÅÒÁFÙ∨	G€FIÈAG€F€ÈAG€€ÎÈAG€€IÈAG€€HÈAG€€FÈAG€€EÈAFJJÈAFJJÎÈAFJJÎÈAFJJGÈAFJJEÀFJJÊÀFJJÊÀFJJÊÈA FJÌÎÈAFJÌÎÈAFJÌÊAFJÌÊAFJÏÎÈAFJÏÎÈAFJÏÎÊAFJÏGÈAFJÎQÊAFJÎÎÈAFJÎÎÈAFJÎÎÈAFJÎÎ FJÎHÊAFJÎÊÊAFJÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎ FJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÊ FJGÎÊAFJGÎÊAFJGÎÊAFJGÊAFJGÊAFJGÊÂFJGE
GH€TÁÒÁFÙVÁGĨĨ	G€FIÈAG€F€ÈAG€€ÎÈAG€€IÈAG€€EÈAG€€EÈAFJJÈAFJJÎÈAFJJÎÈAFJJGÈAFJJEÀFJJÊ FJÌÎÈAFJÌÉAFJĨÈAFJÏÎÈAFJÏÎÈAFJÏGÈAFJÏFÈAFJĨJÈAFJÎÌÈAFJÎÎÈAFJÎÎÈAFJÎÎÈAFJÎ FJÎHĖAFJÎGÈAFJÎEÈAFJÎÊÊAFJÎÎÈAFJIÎÈAFJIÎÈAFJIÎÈAFJIÎÈAFJIÎÈAFJIÎÈAFJIÎÈAFJIÎ FJIÌÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÊÊAFJAIÊAFJAÎÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎÊA FJHHÊAFJHGÊAFJHFÊAFJH€ÊAFJGJÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGIÊAFJGHÊAFJGFÊAFJG€
GH€IÅÒÅFÙVÅÙV	G€FIÈÅG€F€ÈÅG€€IÈÅG€€HÈÅG€€FÈÅG€€€ÅFJJJÈÅFJJÊÅFJJÊÅFJJGÈÅFJJFÅFJJ€ÅFJÌÊÅ FJÌÉÅFJÌFÅFJÌ€ÅFJÏÊÅFJÏÊÅFJÏGÅFJÏFÅFJÏ€ÅFJĴEÅFJĴÊÅFJÎÊÅFJÌÊÅFJÌ FJÎGÈÅFJÎFÅFJ΀ÅFJÏÊÅFJÏÊÅFJÏÊÅFJÎÊÅFJÏEÅFJÏEÅFJÏEÅFJIÊÅFJIÊÅFJIÈÅFJIÈÅFJI FJIÊÅFJIÊÅFJIÊÅFJIÊÅFJGËÅFJGËÅFJGËÅFJGËÅFJGËÅFJGEÅFJG€ FJHFÅFJH€ÅFJGJÊÅFJGÌÊÅFJGËÅFJGËÅFJGIÊÅFJGIÊÅFJGEÅ
GH€ÎÅÒÅFÙ∨	G€FIÈAG€F€ÈAG€€ÎÈAG€€IÈAG€€HÈAG€€FÈAG€€EÈAFJJÈAFJJÎÈAFJJÎÈAFJJGÈAFJJFÈAFJJ€È FJÌÎÈAFJÌ€ÈAFJÏÎÈAFJÏ[ÈAFJÏGÈAFJÏ€ÈAFJĨJÈAFJÎÌÈAFJÎÎÈAFJÎÎÈAFJÎÎÈAFJÎ FJ΀ÈAFJÍÌÈAFJIÎÈAFJIÎÈAFJIÎÈAFJIÎÈAFJI FJIÎÊAFJIIÈAFJI]ÊAFJIÎÈAFJIÎÈAFJIÎÈAFJI FJGĨÈAFJGÎÈAFJGIÊAFJGHÈAFJGFÈAFJG€
GH€ÎÅÒÁFÙVÅÙV	G€FIÈAG€F€ÈAG€€IÈAG€€HÈAG€€FÈAG€€€ÈAFJJJÈAFJJÎÈAFJJÎÈAFJJGÈAFJJFÈAFJJ€ÈAFJÌÊ À FJÌÎÈAFJÌFÈAFJÌ€ÈAFJÏÎÈAFJÏÎÈAFJÏGÈAFJÏFÈAFJÌGÈAFJÎJÈAFJÎÎÈAFJÎÎÈAFJÎÎÈAFJÎ FJÎGÊAFJÎFÊAFJ΀ÈAFJIÎÈAFJIÎÈAFJIÎÊAFJÎÎÊAFJÎ FJIÎÊAFJIÎÊAFJIIÊAFJIGÊAFJI€ÊAFJAJÊAFJHÌÊAFJHÎÊAFJHÎÊAFJHIÊAFJHHÊAFJHHÊAFJH FJHFÊAFJH€ÊAFJGJÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGIÊAFJGIÊAFJGFÊAFJG€
GH€ÎÀÒÁF∙cÀÙc	G€FIÈAG€€ÎÈAG€€IÈAG€€HÈAG€€FÈAG€€€ÈAFJJJÈAFJJÎÈAFJJÎÈAFJJCÈAFJJFÈAFJJ€ÈAFJÌÊ À FJÌÎÈAFJÌFÈAFJÌ€ÈAFJÏÎÈAFJÏÎÈAFJÏGÈAFJÏFÈAFJÎJÈAFJÎJÈAFJÎÎÈAFJÎÎÈAFJÎÎÈAFJÎÎÈAFJÎÎÈAFJÎ FJÎHĖAFJÎGÈAFJÎFÈAFJ΀ÈAFJÎÎÈAFJIÎÈAFJIÎÊAFJIÎÊAFJIÎÈAFJIÎÈAFJIÎÈAFJIÎÈAFJIÎ FJIÌÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÊÊAFJHJÊAFJHÌÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎÊA FJHHÊAFJHGÊAFJHFÊAFJH€ÊAFJGJÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGIÊAFJGHÊAFJGFÊAFJG€
GH€ÎÅÒÅF∙cÅÙc	G€FIÈAG€€ÎÈAG€€IÈAG€€HÈAG€€FÈAG€€€ÈAFJJJÈÀFJJÎÈAFJJÎÈAFJJEÀFJJ€ÀFJJÊÀFJ]ÎÈA FJÌÎÈAFJÌFÈAFJÌ€ÈAFJÏÎÈAFJÏÎÈAFJÏGÈAFJÏFÈAFJÎEÀAFJÎÌÈAFJÎÎÈAFJÎÎÈAFJÎÎÈAFJÎÎÈAFJÎ FJÎHĖAFJÎGÈAFJÎFÈAFJ΀ÈAFJÎÎÈAFJIÎÈAFJÎÎÈAFJÎÎÈAFJÎÎÈAFJÎÎÈAFJIÎÈAFJIÎÈAFJIÎ FJIÌÈAFJIÎÈAFJIÎÈAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJÎÎÊAFJAÎÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎ FJHHÊAFJHGÊAFJHFÊAFJH€ÊAFJGJÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGIÊAFJGHÊAFJGFÊAFJG€
GH€ĬÅÒÅFÙVÅÙV	G€FIÈÅG€FEÈÅG€€ÎÈÅG€€IÈÅG€€HËÅG€€FËÅG€€ËÅFJJËÅFJJÎÈÅFJJËÅFJJËÅFJJËÅFJJËÅFJJËÅFJJËÅFJJËÅFJ] FJÌÎËÅFJÌËÅFJÌËÅFJÌËÅFJĨËÅFJĨËÅFJĨËÅFJĨËÅFJĨËÅFJĨËÅFJĨËÅFJĨ
GH€ÌÁFÐGÁÒÁFÙV	G€FIÈÅG€F€ÈÅG€€ÎÈÅG€€IÈÅG€€HĖÅG€€FÈÅG€€EÅFJJJÈÅFJJÎÈÅFJJÎÈÅFJJGÈÅFJJFÅFJÌÌÈ FJÌIĖÅFJÌFÅFJÌ€ÅFJÏÎÈÅFJÏİÈÅFJÏGÅFJÏFÅFJÌËÅFJÌIÈÅFJÌIÈÅFJÌÈÅFJÌÈÅFJÌÈÅFJÌÈÅ FJÌHĖÅFJÎGĖÅFJÌFÅFJÌ€ÅFJĬÌÈÅFJÍÌÈÅFJĬÌÈÅFJÍİÈÅFJÍIÈÅFJÍIÈÅFJIÈÅFJIÌÈÅ FJIÌÈÅFJIĨÈÅFJIÎÈÅFJIİÈÅFJIÌÈÅFJIËÅFJGÌÈÅFJGÌÈÅFJGÌËÅFJGIĖÅFJGHĖÅFJGFÅFJG€

<u>5XXfYgg`FYgYUfW\YX</u>	5XXfYgg`Bch`=XYbh]Z]YX`]b`FYgYUfW\`Gc i fWY
GH€ÌÁHÐIÁÖÁFÙV	G€FIÈÅG€F€ÈÅG€€ÎÈÅG€€IÈÅG€€HĖÅG€€FĖÅG€€EÅFJJÈÅFJJÎÈÅFJJÎÈÅFJJËÅFJJËÅFJ]ËÅFJÌËÅFJÌËÅFJÌËÅFJÌËÅFJÌËÅFJÌËÅFJÌËÅFJÌ
GH€ÌÁÒÁFÙ∨	G€FIÉAG€F€ÉAG€€ÎÊAG€€IÊAG€€HÊAG€€FÊAG€€EÊAFJJJÊAFJJÎÊAFJJÎÊAFJJGÊAFJJFÊAFJÌÎÊ A FJÌÎÊAFJ΀ÊAFJÏÎÊAFJÏÎÊAFJÏGÊAFJÏ€ÊAFJÎJÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎ FÎAFJ΀ÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÊAFJ
GH€ÌÁÒÁFÙVÁÙV	G€FIÉÅG€F€ÉÅG€EIÉÅG€€HÉÅG€€FÉÅG€€EÅFJJJÉÅFJJÎÉÅFJJŰÉÅFJJGÉÅFJJFÉÅFJJ€ÅFJÌÊÅ FJÌÍÉÅFJÌFÉÅFJÌ€ÅFJÏÎÉÅFJĬÍÉÅFJĬGÅÅFJĬFÅFJÏEÅFJĴJÉÅFJĴÌÉÅFJĴÌÉÅFJÌ FĴĴGÅFJĴFÉÅFJÌ€ÅFJĬĨÉÅFJĬĨÉÅFJĬĨÉÅFJĬĨÉÅFJĬ FJIĴÊÅFJIĨÉÅFJI EÅFJIĨÊÅFJIIÉÅFJI EÅFJIĴÊÅFJGËÅFJGĨÈÅFJGĨÊÅFJGĨÊÅFJGIÊÅFJGIÅ ÅFJGÉÅFJGFÉÅFJGJÉÅFJGĨÈÅFJGĨÊÅFJG
GH€ÌÀÒÀF∙cÀÙc	G€€ÎÊKG€€IÊKG€€EÊKGE€EÊKGE€EÊKFJJJÊKFJJÎÊKFJJÊÊKFJJÊÊKFJJÊÊKFJ]ÊÊKFJÌÎÊKFJÌÎÊKFJÎ FJÎEÊKFJÎÊÊKFJÎÎÊKFJÎÎÊKFJÎÎÊKFJÎÊÊKFJÎÊKFJÎ
GH€ÌÀÒÀF∙cÀÙc	G€€ÎÊÅG€€IÊÅG€€HÊÅG€€FÊÅG€€ÊÅFJJJÊÅFJJÎÊÅFJJÎÊÅFJJÊÅFJJÊÅFJJÊÅFJÌÊÅFJÌÊÅFJÌÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJIÎÊÅFJIÎÊ FJÎÊÅFJÎÎÊÅFJÎÎÊÅFJIÎÊÅFJÎÎÊÅFJÎÎÊÅFJIÎÊÅFJIÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊ FJIÎÊÅFJIÎÊÅFJIÎÊÅFJIÎÊÅFJIÎÊÅFJIÊÊÅFJIÎÊÅFJÎÎÊÅFJGÎÊÅFJGÊÅFJGÊÅFJÊ
GH€JÅÒÁFÙVÅÙV	G€FIÊ&G€FEÊ&GE€ÎÊ&G€€IÊ&G€€HÊ&GE€EÊ&GE€EÊ#JJJÊ#FJJÎÊ#FJJÊÊ#JJEÊ#JJEÊ#JJEÊ FJÎÎÊ#FJÎÊÊ#JÎEÊ#JÎEÊ#JÎÊ FJÎIÊ#FJÎHÊ#FJÎGÊ#FJÎÊÊ#FJÎÊÊ#FJÎÊ FJÎIÊ#FJÎÊ#FJÎÊÊ#JÎÊ FJIÎÊ#FJIÎÊ#FJIÊ FJHHÊ#FJHGÊ#FJHÊÊ#FJGJÊ#FJGÎÊ#FJGÎÊ#FJGÎÊ#FJGÎÊ#FJGIÊ#FJGHÊ#FJGÊ FJHHÊ#FJHGÊ#FJHFÊ#FJH€Ê#FJGJÊ#FJGÎÊ#FJGÎÊ#FJGÎÊ#FJGIÊ#FJGHÊ#FJGÊ#FJG
GHF€ÍÒÁFÙ∨	G€FIÊAG€FÊÊAG€€ÎÊAG€€IÊAG€€HÊAG€€FÊAG€€ÊAFJJÊAFJJÎÊAFJJÎÊAFJJÊÂFJJÊÂFJJÊÂFJJÊÂFJ]ÊÂFJÎÊÂ FJ΀ÎAFJÎÎÊAFJÎÎÊAFJÎGÊAFJ΀ÊAFJÎJÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎ FJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÊAFJÎÊAFJÎÊÊAFJÎÊ FJÎÎÊAFJIÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÊAFJHÊÂFJHÊÂFJHÊÂFJBÎÊA FJGÎÊAFJGÎÊAFJGHÊAFJGÊÂFJG€
GHF€ÁÒÁFÙVÁÙV	G€FIÈAG€F€ÈAG€€ÎÈAG€€IÈAG€€HÈAG€€FÈAG€€EÈAFJJÈAFJJÎÈAFJJÎÈAFJJGÈAFJJFÈAFJJ€ÈA FJÌÎÈAFJÌÊAFJÌEÈAFJÌÊAFJĬÎÈAFJĬÎÈAFJÏGÈAFJÏËÈAFJÏ€ÈAFJÏ€ÈAFJÌÊAFJÌÊAFJÌÎÈAFJÌ FJÎHÊAFJÎGÊAFJÎFÊAFJÎÊÊAFJÎÎÊAFJIÎÊAFJIÎÊAFJIÊAFJIÊAFJIÊAFJIÊ FJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJHÌÊAFJHÎÊAFJHIÊAFJHIÊAFJHIÊ FJHGÊAFJHFÊAFJH€ÊAFJGJÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGIÊAFJGHÊAFJGFÊAFJG€
GHFFÁHÐ I Á Ó ÁFÙ V	G€FIÈ&G€F€È&G€€ÎÈ&G€€IÈ&G€€FÈ&GE€E¢&GE€E&FÈ&FJJÈ&FJJÎÈ&FJJÎÈ&FJJÊ&FJJÊ&FJJÊ FJÌÎÈ&FJÌFÈ&FJÌ€È&FJÏÎÈ&FJÏÎÈ&FJÏÊ&FJÏÊ FJÎHÊ&FJÎGÊ&FJÎFÊ&FJÎÊ FJÎÊ&FJÎÊ&FJÎÊ FJÎÎÊ FJIÎÊ FJIÎÊ FJHÊ&FJHÊ&FJHÊ FJHÊ&FJHÊ FJHÊ FJHÊ FJHÊ FJHÊ FJHÊ FJHÊ FJHÊ
GHFFÁÒÁFÙV	G€FIÈkG€F€ÈkG€€ÎÈkG€€IÈkG€€EÈkG€€EÈkFJJÈkFJJÎÈkFJJÎÈkFJJÊÈkFJJĒÈkFJ]ÎÈk FJÌ€ÈkFJĨÎÈkFJĨÎÈkFJĨGÈkFJĨ€ÈkFJĴÈkFJÎĨÈkFJÎÎÈkFJÎÎÈkFJÎIÈkFJÎ FJÎÌÈkFJÎÎÈkFJÎÎÈkFJÎÎÈkFJÎGÈkFJ΀ÈkFJIÊ FJIIÊkFJI€ÈkFJHJÈkFJHÌÈkFJHÎÊkFJHÎÊkFJHIÊkFJHEÊkFJH€ÈKFJGÌÈKFJGĨÈ FJGÎÊkFJGHÊkFJGFÊKFJG€
GHFFÁÒÁFÙVÁÙV	G€FIÈÅG€F€ÈÅG€€IÈÅG€€HÈÅG€€FÈÅG€€€ÅFJJJÈÅFJJÎÈÅFJJËÅFJJGÈÅFJJFÈÅFJJ€ÅFJÌÈÅFJÌËÅFJÌËÅFJÌËÅFJÌËÅFJÌËÅFJÌËÅFJÌËÅFJÌË

5XXfYgg`FYgYUfW\YX	5XXfYgg`Bch`=XYbh]Z]YX`]b`FYgYUfW\`Gc i fWY
GHFHÁFÐGÁÓÁFÙV	G€FIÊAG€F€ÊAG€€ÎÊAG€€IÊAG€€HÊAG€€FÊAG€€ÊAFJJJÊAFJJÎÊAFJJÎÊAFJJGÊAFJJFÊAFJÌÊ Â FJÌÎÊAFJÎFÊAFJ΀ÊAFJÏÎÊAFJÏÎÊAFJÏGÊAFJÏFÊAFJÎEÊAFJÎJÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊ FJÎHÊAFJÎGÊAFJÎFÊAFJÎÊÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÊAFJ
GHFHÍÒÍFÙV	G€FIÊAG€FÊÊAG€€ÎÊAG€€IÊAG€€HÊAG€€FÊAG€€ÊAFJJDÊAFJJÎÊAFJJÎÊAFJJGÊAFJJFÊAFJÌÊ FJÌ€ÊAFJÏÎÊAFJÏÎÊAFJÏGÊAFJÏ€ÊAFJÎJÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎ FJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎ FJÎÎÊAFJIÎÊAFJIÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎ FJIÎÊAFJIÊAFJHÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÊAFJHHÊAFJHGÊAFJHFÊAFJH€ÊAFJGJÊA FJGÎÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGHÊAFJGFÊAFJG€
GHFHÁÒÁFÙVÁÙV	G€FIÈÅG€F€ÈÅG€EIÈÅG€€HÈÅG€€FÈÅG€€EÅFJJJÈÅFJJÎÈÅFJJËÅFJJEÅFJJFÈÅFJJ€ÅFJÌÈÅFJÌÈÅFJÌÈÅFJÌÈÅFJÌÈÅFJÌÈÅFJÌÈÅFJÌÈ
GHFÍ ÅÒÅFÙ∨	G€FIÈ&G€F€È&G€€ÎÈ&G€€IÈ&G€€FÈ&GE€EÊ&GE€EÊ#JJJÈ#FJJÎÈ#FJJÎÈ#FJJÊÅFJJËÅFJJË FJÌÎÈ#FJĨ€Ë#FJĨÎË#FJĨÎÊ#FJĨGË#FJĨË#FJĨJË#FJÎÎË#FJÎÎË#FJÎÎË#FJÎÎË#FJÎ FJ΀Ë#FJÎÎÊ#FJÎÎË#FJÎÎÊ#FJÎÎÊ#FJÎÎÊ#FJÎÎÊ#FJÎÊ#FJIÎÊ#FJIÎÊ#FJIÎÊ FJIÎÊ#FJIÎÊ#FJIÎÊ#FJIÎÊ#FJHÎÊ#FJHÎÊ#FJHÎÊ#FJHIÊ#FJHGÊ#FJH€Ë#FJGĴÊ# FJGĨÊ#FJGÎÊ#FJGÎÊ#FJGÎÊ#FJGEÊ#FJG€
GHF Í ÁÒÁFÙVÁÙV	G€FIÈIG€F€ÈIG€€IÈIG€€HÈIG€€FÈIG€€€ÈIFJJJÈIFJJÎÈIFJJÎÈIFJJÊÈIFJJEÈIFJJ€ÈIFJJ€ÈIFJ] FJÌÊÈIFJÌFÈIFJÌ€ÈIFJÏÊÈIFJÏÊÈIFJÏÊÈIFJÏËÈIFJÏEÈIFJĴÈIFJĴÈÈIFJÌÈÈIFJÌÈÈIFJÌÈ FJÎÊÈIFJĨÊÈIFJĨ€ÈIFJĨÊÈIFJĨÊÈIFJIÎÊIFJĨÊÈIFJIÊÈIFJIÊÈIFJIÊÈIFJIÊÈIFJIÈÈIFJIÈÈ FJIÎÊIFJIÎÊIFJIIÊIFJIÊÈIFJGËÈIFJGĨÈIFJGĨÊIFJGĨÈIFJGIÊIFJGEÊIFJG€
GHFÌ ÅÒÅFÙ∨	G€FIÈ&G€F€È&G€€ÎÈ&G€€IÈ&G€€EË&GE€EË&GE€EË&FJJËË&FJJÎË&FJJÎË&FJJËË&FJJËË FJÌ€Ë&FJĨÎË&FJĨË FJÎÊËFJĨÎË FJÎÎË FJÎÎË FJIÎË FJIÎË FJIÎË FJIÎË FJIÎË FJGÎË F FJGÎË F FJGÎË F F F F F F F F F F F F F F F F F F F
GHFÌ ÁÒÁFÙVÁÙV	G€FIÈ&G€F€È&G€€ÎÈ&G€€IÈ&G€€FÈ&GE€EÈ&GE€EÈ&FJJÈ&FJJÎÈ&FJJÎÈ&FJJGÈ&FJJĒÈ FJÌÎÈ&FJÌEÅFJÌEÅFJÌÊ&FJÏÎÈ&FJĬÎÈ FJÏGÈ&FJÏEÈ&FJÏÊ&FJÎÊ FJÎHÊ&FJÎGÊ&FJÎFÊ&FJÎÊ FJÎÊ&FJÎÊ&FJÎÊ FJIÎÊ FJIÎÊ FJIÊ FJHGÊ&FJHEÊ&FJHÊ E FJHGÊ&FJHEÊ&FJGÊ E FJHGÊ FJHGÊ FJHEÊ FJHGÊ FJH F FJHGÊ FJH F FJHGÊ FJH F F F F F F F F F F F F F F F F F F
GHG€ÁÒÁFÙVÁÙV	G€FIÈ&G€F€È&G€€ÎÈ&G€€IÈ&G€€FÈ&GE€EÊ&GE€EÈ&FJJDÈ&FJJÎÈ&FJJĜÈ&FJJGÈ&FJJEÈ FJÌÎÈ&FJÌÊÈ&FJÌEÈ&FJÌÊ FJÎHÊ&FJÎGÊ&FJÎFÊ&FJÌÊ FJÎHÊ&FJÎGÊ&FJÎFÊ&FJÎÊ FJÎÊ&FJIÎÊ FJIÎÊ FJIÎÊ FJIÎÊ FJHGÊ&FJHE Ê&FJGÊ&FJHE Ê FJHGÊ FJHE Ê FJHGÊ FJHE Ê FJHGÊ FJHE Ê FJGÎÊ FJGÊ Ê FJGÎÊ FJGÊ Ê FJGÊ Î Ê FJGÎÊ FJGÊ Î Ê FJGÎÊ FJGÊ Î Ê FJGÎÊ FJGÊ Î Ê FJGÎÊ FJGÊ Î Ê FJGÎÊ FJGÊ Î Ê FJGÎÊ FJGÊ Î Ê FJGÎÊ FJGÊ Î Ê FJGÎÊ FJGÊ Î Ê FJGÎÊ FJGÊ Î Ê FJGÎÊ FJGÎÊ FJGÊ Î Ê FJGÎÊ FJGÎÊ FJGÊ Î Ê FJGÎÊ FJGÎÊ FJGÎÊ FJGÊ F FJGÎÊ FJGÎÊ FJGÎÊ F F F F F F F F F F F F F F F F F F F
GHGFÁÒÁFÙV	G€FIÈAG€F€ÈAG€€ÎÈAG€€IÈAG€€FÈAG€€EÈAFJJÈAFJJÎÈAFJJÎÈAFJJÊÀFJJËÀFJ]ÎÈAFJJËÀFJÌËÈAFJIËÈAFJIËÈAFJIËÈAFJIËÈAFJIËÈAFJIËÈAFJIËÈAFJIËÈAFJIËÈAFJIËÈAFJIËÈAFJIËÈAFJHËÈAFJHËÈAFJHËÈAFJHËÀFJHËÀFJHËÀFJHËÀFJHËÈAFJHËÈAFJE
GHGFÁÒÁFÙVÁÙV	G€FIÈAG€F€ÈAG€€IÈAG€€HÈAG€€FÈAG€€€ÅFJJJÈAFJJÎÈAFJJÎÈAFJJEÅFJJ€ÅFJJ€ÅFJ] FJÌİÈAFJÌFÈAFJÌ€ÅFJÏÎÈAFJÏİÈAFJÏGÅFJÏFÅFJÏ€ÅFJĴÌÈAFJÎJÅFJÌÎÈAFJÌ FJÎGÊAFJÎFÈAFJ΀ÅFJİÎÈAFJİÎÈAFJIÎÊAFJIİÊAFJI FJIÎÊAFJIIÊAFJIIÊAFJIĞÂFJIÊ FJHFÈAFJHÊAFJIÊAFJGÌÊAFJGÎÊAFJGÎÊAFJGIÊAFJGIÊAFJGFÊAFJG€
GHGFÅÒÅF∙cÅÙc	G€€ÎÊKG€€IÊKG€€EHÊG€€EÊKGEÇEÊKFJJJÊKFJJÎÊKFJJÊÊKFJJEÊKFJJEÊKFJÌÊÊKFJÌÊÊK FJÌÊÊKFJÎÊÊKFJÎÎÊKFJÎÎÊKFJÎÊÊKFJÎÊÊKFJÎÊKFJÎ

<u>5XXfYgg`FYgYUfW\YX</u>	5XXfYgg`Bch`=XYbh]Z]YX`]b`FYgYUfW\`Gc i fWY
GHGFÁÒÁF∙cÁÙc	G€€ÎÊÅG€€IÊÅG€€HÊÅG€€FÊÅG€€ÊÅFJJJÊÅFJJÎÊÅFJJÎÊÅFJJÊÅFJJÊÅFJJĒÅFJJĒÊÅFJÌÎÊÅFJÌÎÊ Å FJÌFÊÅFJÌ€ÅFJÏÎÊÅFJÏÎÊÅFJÏĞÊÅFJÏFÊÅFJÏÊÊÅFJÎĴÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎ FJÎGÊÅFJÎFÊÅFJ΀ÅFJIÎÊÅFJIÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎ FJIÎÊÅFJIÎÊÅFJIÎÊÅFJIÎÊÅFJI FJHGÊÅFJHFÊÅFJH€ÅFJGJÊÅFJGÎÊÅFJGÎÊÅFJGÎÊÅFJGIÊÅFJGHÊÅFJGFÊÅFJG FJHGÊÅFJHFÊÅFJH€ÅFJGJÊÅFJGÎÊÅFJGÎÊÅFJGÎÊÅFJGÎÊ
GHGGÁÒÁFÙV	G€FIÈIG€F€ÈIG€€ÎÈIG€€IÈIG€€HÈIG€€FÈIG€€EÈIFJJÈIFJJÎÈIFJJÎÈIFJJGÈIFJJFÈIFJJ€È FJÌÎÈIFJÌÉÈIFJÏÈÈIFJÏÎÈIFJÏÎÈIFJÏGÈIFJÏ€ÈIFJÎÌÈIFJÎÎÈIFJÎÎÈIFJÎÎÈIFJÎÌÈIFJÎ FJÎFÈIFJ΀ÈIFJÎÌÈIFJÏÎÈIFJÎÎÈIFJÎÎÈIFJÎÎÈIFJÎÎÈIFJÎÊÈIFJIÊÈIFJIÊ FJIÎÊIFJIÎÊIFJIIÊ FJGJÊIFJGÌÊIFJGÎÊIFJGÎÊIFJGÎÊIFJGIÊIFJGHÊIFJGE FJGJÊIFJGÌÊIFJGÎÊIFJGÎÊIFJGÎÊIFJGIÊ
GHGHÁÒÁFÙV	G€FIÈAG€FEÈAG€€ÎÈAG€€IÈAG€€EÈAG€€EÈAGE€EÈAFJJÈAFJJÎÈAFJJÎÈAFJJEÀFJÌË FJÌ€ÈAFJĨÎÈAFJĨİÈAFJÏGÈAFJĬ€ÈAFJĨJÈAFJÎĨÈAFJÎÎÈAFJÎÎÈAFJÎIÈAFJÎFÈAFJÎFÈAFJÌ FJÍÌÈAFJÎÎÈAFJÎÎÈAFJÍÎÈAFJÍGÈAFJĨÊAFJÎÊAFJIÎÊAFJIÌÈAFJIÌÈAFJIÎÈAFJIÎÈA FJIIÊAFJIGÊAFJI€ÊAFJHJÊAFJHÌÈAFJHÎÊAFJHÎÊAFJHIÊAFJHHÊAFJHGÊAFJHFÊAFJH€ÊÅ FJGJÊAFJGÌÊAFJGĨÊAFJGÎÊAFJGIÊAFJGIÊAFJGHÊAFJGE€
GHGHÁÒÁFÙVÁÙV	G€FIÈÅG€F€ÈÅG€€ÎÈÅG€€IÈÅG€€FËÅG€€FËÅG€€ËÅFJJËÅFJJĨÈÅFJJËÅFJJËÅFJJËÅFJJËÅFJJËÅFJJËÅFJË FJÌĨÈÅFJĨÉÅFJĨËÅFJÌËÅFJĨËÅFJĨËÅFJĨËÅFJĨËÅFJĨËÅFJĨËÅFJĨË FJĨIËÅFJĨHÅFJĨGÅFJĨËÅFJĨËÅFJĨËÅFJĨËÅFJĨËÅFJĨËÅFJĨËÅFJĨË
GHG Í ÁÒÁFÙV	G€FIÈÅG€F€ÅG€€ÎÈÅG€€IÈÅG€€FËÅG€€FËÅG€€ËÅFJJËÅFJJÎËÅFJJËÅFJJËÅFJJËÅFJJËÅFJ] FJÌ€ÅFJĨĨËÅFJĨËÅFJĨĞÅFJĨ€ÅFJĨ€ÅFJĨËÅFJĨĨËÅFJÎËÅFJĨËÅFJĨËÅFJĨËÅFJĨËÅFJĨË FJÍÌËÅFJĨĨËÅFJĨĨËÅFJĨËÅFJĨË FJIIËÅFJIGÅFJI€ÅFJHJËÅFJHĨËÅFJHĨËÅFJHĨËÅFJHË FJGJËÅFJGĨËÅFJGĨËÅFJGËÅFJGËÅFJGËÅFJGËÅFJGE FJGJËÅFJGĨËÅFJGĨËÅFJGË
GHG Í ÁÒÁFÙVÁÙV	G€FIÈÅG€F€ÈÅG€€IÈÅG€€HÈÅG€€FÈÅG€€€ÅFJJJÈÅFJJÎÈÅFJJÜÈÅFJJEÅFJJEÅFJJ€ÅFJÌÈÅ FJÌİÈÅFJÌFÅFJÌ€ÅFJÏİÈÅFJÏİÈÅFJÏGÈÅFJÏFÅFJÏEÅFJÎEÅFJÎEÅFJÎÈÅFJÌÈÅFJÌÈÅFJÌ FJÎGÅFJÎFÅFJÌ€ÅFJİÎÈÅFJİÏÈÅFJIİÈÅFJIİÈÅFJI FJIÎÊÅFJIİÊÅFJIEÅFJIEÅFJIËÅFJHÌÅFJHÌËÅFJHÏËÅFJHËÅFJHÈÅFJHEÅ FJHFÅFJH€ÅFJGJÊÅFJGÌÈÅFJGÏÈÅFJGÏÊÅFJGIÊÅFJGIÅFJGFÅFJG€
GHG Í ÅÒÁF∙cÀÙc	G€€ÎÊÅG€€IÊÅG€€HÊÅG€€FÊÅG€€€ÅFJJJÊÅFJJÎÊÅFJJÎÊÅFJJÊÅFJJĒÅFJJĒÅFJÌÎÊÅFJÎÎÊÂFJÎÎÊÂFJÎÎÎÊÂFJÎÎÎÊÂFJÎÎÊÂFJÎÎÊÂFJÎÎÊÂFJÎÎÎÊÂFJÎÎÎÊÂFJÎÎÎÊÂFJÎÎÊÂFJÎÎÊÂFJÎÎÊÂFJÎÎÊÂFJÎÎÊÂFJÎÎÎÊÂFJÎÎÎÊÂFJÎÎÎÊÂFJÎÎÊÂFJÎÎÊÂFJÎÎÊÂFJÎÎÊÂFJÎÎÊÂFJÎÎÎÊÂFJÎÎÎÊÂFJÎÎÎÊÂFJÎÎÎÎÎÎÎÎÎÎ
GHG Í ÅÒÁF∙cÀÙc	G€€ÎÊÅG€€IÊÅG€€FÊÅG€€FÊÅG€€EÅFJJJÊÅFJJÎÊÅFJJÎÊÅFJJÊÅFJJĒÅFJJĒÅFJÌÎÊÅFJÎÎÊÂFJÎÎÊÂFJÎÎÎÊÂFJÎÎÎÊÂFJÎÎÎÊÂFJÎÎÎÊÂFJÎÎÎÊÂFJÎÎÊÂFJÎÎÊÂFJÎÎÊÂFJÎÎÊÂFJÎÎÎÊÂFJÎÎÎÊÂFJÎÎÎÊÂFJÎÎÊÂFJÎÎÊÂFJÎÎÊÂFJÎÎÊÂFJÎÎÊÂFJÎÎÎÊÂFJÎÎÎÊÂFJÎÎÎÊÂFJÎÎÎÎÎÎÎÎÎÎ
GHGJÁÒÁFÙV	G€FIÈÅG€F€ÈÅG€€ÎÈÅG€€IÈÅG€€FËÅG€€FËÅG€€ËÅFJJËÅFJJÎÈÅFJJËÅFJJËÅFJJËÅFJ]ËÅFJÌË FJÌ€ÅFJĨÎËÅFJĨËÅFJĨĞÅFJĨ€ÅFJĨ€ÅFJĨËÅFJĨĨËÅFJÎËÅFJĨËÅFJĨËÅFJĨËÅFJĨËÅFJĨË FJÍÌËÅFJĨĨËÅFJĨËÅFJĨËÅFJĨË FJIIËÅFJI€ÅFJHJËÅFJHĨËÅFJHĨËÅFJHĨËÅFJHIËÅFJHEÅFJHGËÅFJHEÅFJH€ FJIËÅFJGĨËÅFJGĨË FJGĨËÅFJGĨË
GHGJÁÒÁFÙVÁÙV	G€FIÈÅG€FEÈÅG€€IÈÅG€€HÈÅG€€EÈÅG€€EÅFJJJÈÅFJJÎÈÅFJJËÅFJJEÅFJJEÅFJJ€ÅFJ]ÈÅFJÌÈÅ FJÌÎÈÅFJÌEÅFJÌEÅFJÏÎÈÅFJÏÎÈÅFJÏËÅFJÏËÅFJĨËÅFJÎÈÅFJÎÈÅFJÎÈÅFJÌEÅFJÌEÅFJÌEÅFJÌEÅ FJÎĞÅFJÎÊÅFJ΀ÅFJÎÊÅFJÎÎÈÅFJÎÎÊÅFJIÎÊÅFJÎÎÊÅFJÎÊÅFJÎÊÅFJÎÊÅFJÎÊ FJIÎÊÅFJIÎÊÅFJIÎÊÅFJIÎÊÅFJIËÅFJIÊ FJHGÅFJHFÅFJH€ÅFJGJÊÅFJGÌÊÅFJGÎÊÅFJGÎÊÅFJGIÊÅFJGIÊÅFJGEÊÅFJG€
GHGJÁÒÁF∙cÁÙc	G€€ÎÊÅG€€IÊÅG€€HÊÅG€€FÊÅG€€EÅFJJJÊÅFJJÎÊÅFJJÎÊÅFJJGÊÅFJJEÊÅFJJEÊÅFJÌÎÊÅFJÌÎÊÅFJÌÎÊ FJÌFËÅFJÌ€ÅFJĨÎÊÅFJÏÎÊÅFJÏĞÊÅFJÏFËÅFJÏÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊ FJÎGÊÅFJÎFÊÅFJ΀ÅFJIÎÊAFJIÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJIÎÊÅFJÎÎÊÅFJÎÊ FJIÎÊÅFJIÎÊÅFJIÎÊ FJIÎÊÅFJIÎÊ FJHGÊÅFJHFÊÅFJGÊÅFJG]ÊÅFJGÎÊÅFJGÎÊÅFJGÎÊÅFJGIÊÅFJGEÊÅFJGEÊÅFJGE

<u>5XXfYgg`FYgYUfW\YX</u>	5XXfYgg`Bch`=XYbh]Z]YX`]b`FYgYUfW\`Gc i fWY
GHGJÁÒÁF∙cÁÙc	G€€ÎÊÅG€€IÊÅG€€HÊÅG€€FÊÅG€€€ÊÅFJJJÊÅFJJÎÊÅFJJÎÊÅFJJÊÅFJJĒÅFJ]ÊÅFJÌÎÊÅFJÌÎÊÅ FJÌFÅFJÌ€ÅFJĨÎÊÅFJĨÎÊÅFJĨÎÊÅFJĨFÅFJĨFÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎ FJÎGÊÅFJÎFÅFJĨ€ÅFJĨÌÊÅFJĬÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÊÅFJ
GHHFÁÒÁFÙV	G€FIÈAG€F€ÈAG€€ÎÈAG€€IÈAG€€HÈAG€€FÈAG€€EÀFJJJÈAFJJÎÈAFJJÎÈAFJJGÈAFJJFÈAFJJ€ÈA FJÌÍÈAFJĨ€ÈAFJĨÎÈAFJĨÎÈAFJĨGÈAFJĨ€ÈAFJĨJÈAFJÎÎÈAFJÎÎÈAFJÎÎÈAFJÎÎÈAFJÎÌÈAFJÎĤÈAFJÎÈ FJ΀ÈAFJÍÌÈAFJIĨÈAFJÍÎÈAFJÍÎÈAFJÍÎÈAFJÎÊ FJIÎÉAFJIIÈAFJIGÈAFJI€ÀFJHÌÈAFJHÎÈAFJHÎÈAFJHIÊAFJHHÈAFJHGÈAFJHFÈAFJH€È FJGÌÈAFJGĨÈAFJGÎÈAFJGÎÈAFJGIÊAFJGHÈAFJG€€
GHHFÁÒÁFÙVÁÙV	G€FIÈ&G€FEÈ&GE€IÈ&G€€EÈ&GE€EÈ&GE€È&FJJJÈ&FJJÎÈ&FJJĒÈ&FJJEÈ&FJJ€È&FJJÈÈ A FJÌÎÈ&FJÌEÈ&FJÌEÈ&FJÏÊE&FJÏÊE&FJÏÊE&FJÏÊE&FJÏEÈ&FJÎÈ&FJÎÈE FJÎÊE&FJÎÊE&FJ΀E FJÎÊEFJÎÊE&FJÎÊE FJIÎÊEFJIÊE FJIÊEFJIÊE FJHÊÊFJHÊÊFJGÊÊ FJHÊÊFJHÊÊFJGÊÊ FJHÊÊFJHÊÊ
GHHFÅÒÅF∙cÅÙc	G€F€ÅG€€ÎÅG€€IÅG€€HÅG€€FÅG€€€ÅFJJJÅFJJÎÅFJJÎÅFJJGÅFJJFÅFJJ€ÅFJ] FJÌÎÅFJÌFÅFJÌ€ÅFJÏÎÅFJÏÎÅFJÏÎÅFJÏGÅFJÏFÅFJÎ¥ÅFJÎJÅFJĴĬÅFJÎÎ FJÌHÅFJÎGÅFJÎFÅFJ΀ÅFJIÎ FJIHÅFJIÎGÅFJIÎÊÅFJI΀ÅFJIÎ FJIHÅFJIÎÅFJIÎ FJHHÅFJHGÅFJHFÅFJH€ÅFJGJÅFJGÌÅFJGĨÅFJGÎÅFJGIÊÅFJGIÊÅFJGHÅFJGFÅFJG€
GHHFÁÒÁF∙cÁÙc	G€F€ÈÅG€€ÎÈÅG€€IÈÅG€€HÈÅG€€FÈÅG€€€ÅFJJJÈÅFJJÎÈÅFJJÎÈÅFJJGÈÅFJJFÈÅFJJ€ÅFJÌÈÅ FJÌÍÈÅFJÌFÅFJÌ€ÅFJÏÎÈÅFJĬİÈÅFJÏGÅFJÏFÅFJÏ€ÅFJÎJÈÅFJÎÌÈÅFJĴÌÈÅFJÌÌÈÅFJÌ FJÎHĖÅFJÎGÅFJÌFÅFJ΀ÅFJİÌÈÅFJĬÌÈÅFJÍÌËÅFJÍİÊÅFJİİÈÅFJIİÈÅFJI FJIÌÈÅFJIÌËÅFJIÎÈÅFJI FJHHĖÅFJHGÈÅFJHFĖÅFJGJĖÅFJGÌÈÅFJGÌÈÅFJGÎÈÅFJGIÊÅFJGIĖÅFJGHĖÅFJGFĖÅFJG€
GHHGÁÒÁFÙVÁÙV	G€FIÈ&G€F€È&G€€ÎÈ&G€€IÈ&G€€EË&GE€EË&GE€EË&GEVESUJË&FJJÎË&FJJË&FJJË&FJJË FJÌÎË&FJÌË&FJÌË&FJÌË FJÎIË&FJÎH&FJÎĞ&FJÌË FJÎIË&FJÎH&FJÎĞ FJIÌË FJIIË FJHHË&FJHË&FJIË FJHHË&FJHGË&FJHË FJHHË&FJHGË&FJHË FJHHË&FJHGË&FJGË FJHHË
GHHHÁÒÁFÙV	G€FIÈAG€F€ÈAG€€ÎÈAG€€IÈAG€€HÈAG€€FÈAG€€EÀFJJJÈAFJJÎÈAFJJÎÈAFJJGÈAFJJFÈAFJJ€È FJÌÎÈAFJÌIÈAFJÌEÀAFJÌÎÈAFJĬÎÈAFJĬÎÈAFJÏËÀAFJĨEÀAFJÎEÀAFJÎIÈAFJÎÎÈAFJÎÎÈAFJÎÎÈA FJÎHÊAFJÎFÊAFJ΀ÈAFJİÌÈAFJĬÎÈAFJĬÎÊAFJĬÎÊAFJÎIÊAFJÎGÊAFJÎFÊAFJIÊ FJIÎÊAFJIÎÊAFJIÎÊAFJIÊAFJIEÊAFJHJÊAFJHÌÊAFJHÎÊAFJHÎÊAFJHIÊAFJHIÊA FJH€ÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGHÊAFJGFÊAFJG€
GHHHÁÒÁFÙVÁÙV	G€FIÈÅG€F€ÈÅG€€IÈÅG€€FÈÅG€€EÈÅGE€EÅFJJJÈÅFJJÎÈÅFJJËÅFJJEÅFJJEÅFJJ€ÅFJ]ÈÅFJÌÈÅ FJÌİÈÅFJÌFÅFJÌ€ÅFJÏÊÅFJÏİÈÅFJÏËÅFJÏËÅFJÏËÅFJÏEÅFJÎEÅFJÎÈÅFJÎÈÅFJÌÈÅFJÌÈÅFJÌÈÅFJÌÈÅ FJĨHĖÅFJÏĜÅFJIÊÅFJ΀ÅFJI΀ÅFJĬÎÈÅFJIÎÈÅFJIİÊÅFJIÎÊÅFJIËÅFJIËÅ FJIËÅFJIÎÊÅFJIİÊÅFJIÊÅFJIËÅFJIËÅFJIË FJHGÅFJHFÅFJH€ÅFJGJÈÅFJGÌÈÅFJGĨËÅFJGÎÊÅFJGIÊÅFJGIÊÅFJGEÅFJGEÅ
GHHHÁÒÁF∙cÁÙc	G€€ÎÊÅG€€IÊÅG€€FÊÅG€€FÊÅG€€EÅFJJJÊÅFJJÎÊÅFJJÎÊÅFJJÊÅFJJĒÅFJJĒÅFJÌÎÊÅFJÌÎÊÅ FJÌFÊÅFJÌ€ÅFJÏÎÊÅFJĬÎÊÅFJĬGÊÅFJĬFÊÅFJÎEÅFJÎJÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎ FJÎGÊÅFJÎFÊÅFJ΀ÅFJIÎÊÅFJIÎÊÅFJIÎÊÅFJIÎÊÅFJÎÎÊÅFJIÎÊÅFJÎÊ FJIÎÊÅFJIÎÊÅFJIÎÊÅFJIÎÊÅFJIÊÅFJIÊ FJHGÊÅFJHFÊÅFJH€ÅFJGJÊÅFJGÎÊÅFJGÎÊÅFJGIÊÅFJGIÊÅFJGÊÅFJGÊ ÂFJGÊ
GHHHÁÒÁF∙cÁÙc	G€€ÎÊÅG€€IÊÅG€€EHÅG€€EÊÅG€€EÅFJJJÊÅFJJÎÊÅFJJÎÊÅFJJÊÅFJJĒÅFJJĒÅFJÌÎÊÅFJÌÎÊÅ FJÌFÅFJÌ€ÅFJÏÎÊÅFJĨÎÊÅFJĨIÊÅFJĨFÅFJĨEÅFJÎÛÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎ FJÎÊÅFJÎÊÅFJÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÎÊÅFJÎÊÅFJ
GHHÍÅÒÅFÙ∨	G€FIÈÅG€F€ÈÅG€€ÎÈÅG€€IÈÅG€€HÈÅG€€FËÅG€€€ÅFJJJÈÅFJJÎÈÅFJJÊÅFJJGÈÅFJJFÅFJÌÉÅ FJÌ€ÅFJĨÎÈÅFJĨIÉÅFJÏGÈÅFJÏFÈÅFJĨ€ÅFJĨIÈÅFJÎÎÈÅFJÎÎÈÅFJÎIÈÅFJÎIÈÅFJÎ FJÎFÈÅFJ΀ÅFJÍÌÈÅFJIÎÈÅFJIÎÈÅFJIÎÈÅFJIÎÈÅFJIÎÈÅFJIÊÅFJIÊÅFJI FJIÎÈÅFJIÎÈÅFJIIÈÅFJI FJGÌÈÅFJGĨĖÅFJGÎĖÅFJGHĖÅFJGFËÅFJG€

<u>5XXfYgg`FYgYUfW\YX</u>	5XXfYgg`Bch`=XYbh]Z]YX`]b`FYgYUfW\`Gc i fWY
GHH Í ÁÒÁFÙ VÁÙ V	G€FIÈÅG€F€ÈÅG€€IÈÅG€€HÈÅG€€FÈÅG€€€ÅFJJJÈÅFJJÎÈÅFJJÎÈÅFJJËÅFJJËÅFJJËÅFJ] FJÌÍÈÅFJÌFÅFJÌ€ÅFJÏÎÈÅFJÏÎÈÅFJÏGÅFJÏFÅFJÏËÅFJĴÌÈÅFJĴÌÈÅFJĴÌÈÅFJĴÎÈÅFJÌÎÈÅFJÌ FJÎHĖÅFJĴGÅFJĴFÅFJĨÈÅFJĬÌÈÅFJĬÌÈÅFJĬĨËÅFJĬĨÈÅFJĨIÈÅFJĨÈÅFJĴÈÅFJĬÈÅFJIÌÈÅ FJIÌÈÅFJIĨĖÅFJIÎĖÅFJIÈÅFJIEÅFJIĒÅFJIĒÅFJIÈÅFJHÌÈÅFJHÌÈÅFJHÌÈÅFJHËÅ FJHHĖÅFJHGÅFJHFĖÅFJGJĖÅFJGJÈÅFJGĨÈÅFJGĨĖÅFJGIÊÅFJGIÊÅFJGHĖÅFJGFĖÅFJG€
GHHÍÀÒÁF∙cÁÙc	G€€ÎÊÅG€€IÊÅG€€FÊÅG€€FÊÅG€€EÅFJJJÊÅFJJÎÊÅFJJÎÊÅFJJÊÅFJJÊÅFJJĒÅFJÌÎÊÅFJÌÎÊÅFJÌÎÊÅFJÌÎÊÅFJÌÎÊÅFJÎÎÊÅFJÌÎÊÅFJÌÎÊÅFJÎÎÊ ÎÎÎÊÂFJÎÎÊÂFJIÎÊÂFJIÎÊÂFJIÎÊÂFJIÎÊÂFJIÎÊÂFJÎÎÊÂFJÎÎÊÂFJHÎÊÂFJHÎÊÂFJHÎÊÂFJHÎÊÂFJHÎÊ ÎÎÊAFJÎÎÊÂFJÎÎÊÂFJIÎÊÂFJIÎÊÂFJÎÎÊÂFJÎÎÊÂFJÎÎÊÂFJÎÎÊÂFJÎÎÊÂFJÎÎÊÂFJÎÎÊÂFJÎÎÊÂFJÎÎÊÂFJÎÎÊÂFJÎÎÊÂFJÎÎÊÂFJÎÎÊÂFJÎÎ
GHH Í ÅÒÁF∙cÁÙc	G€€ÎÊXG€€IÊXG€€ELÊXG€€EÊXGE€€ÊXFJJJÊXFJJÎÊXFJJÎÊXFJJÊXFJJÊXFJJÊÊXFJÌÎÊXFJÌÎÊXFJÌÎÊ FJÎÊÊXFJ΀ÊXFJÎÎÊXFJÎÎÊXFJÎÎÊXFJÎÎÊXFJÎÎÊXFJÎÎÊXFJÎÎÊXFJÎÎÊXFJÎÎÊXFJÎÎÊ FJÎÊÊXFJÎÊÊXFJÎÊÊXFJÎÎÊXFJÎÎÊXFJÎÎÊXFJÎÎÊXFJÎÎÊXFJÎÊXFJ
ghì Ì ÀÒÁFÙV	G€FIÈAG€F€ÈAG€€ÎÈAG€€IÈAG€€EÈAG€€EÈAFJJÈAFJJÎÈAFJJÎÈAFJJGÈAFJJĒÀFJJĒÈA FJÌÎÈAFJÌEÈAFJÌÊAFJÏÎÈAFJĬÎÈAFJĬGÈAFJĬFÈAFJÎJÈAFJÎÌÈAFJÎÌÈAFJÎÎÈAFJÎÎÈAFJÎÎÈAFJÎÎÈAFJÎ FJÎHÊAFJÎGÊAFJÎFÊAFJÎÊÊAFJÎÎÊAFJIÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJIÎÊAFJIÎÊ FJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÊÊAFJAÊ FJHHÊAFJHGÊAFJHFÊAFJHÊÊAFJGJÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGHÊAFJGÊÂFJGÊ AFJGÎÊAFJGÎÊAFJHÊÂFJHÊÂFJGÊÂFJGÎÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGÊ
GI€€ÁÒÁFÙ∨	G€FIÈkG€F€ÈkG€€ÎÈkG€€IÈkG€€FÈkG€€EÈkFJJÈkFJJÎÈkFJJÎÈkFJJGÈkFJJĒÈkFJÌÈÈk FJÌ€ÈkFJĨÎÈkFJĨİÈkFJĨGÈkFJĨ€ÈkFJĴÈkFJÎĨÈkFJÎÎÈkFJÎİÈkFJĨÌÈkFJĨ FJÎÌÈkFJĨÎÈkFJÍÎÈkFJÍÎÈkFJÍGÈkFJĨ€ÈkFJÍ€ÈkFJIJÈkFJIÌÈkFJIÎÈ FJIIÈkFJIGÈkFJHÈÈkFJHJÈkFJHÌÈkFJHÎÈkFJHIÈkFJHHÈkFJHHÈkFJHEÈkFJGÌÈ FJGĨÈKFJGÎÈKFJGÉKFJGFÈKFJG€
GI€€ÅÒÅFÙVÅÙV	G€FIÈAG€F€ÈAG€€ÎÈAG€€IÈAG€€EÈAG€€EÈAFJJÈAFJJÎÈAFJJÎÈAFJJÊÀFJJÊÀFJJÊÈA FJÌÎÈAFJÌÊAFJÌEÈAFJÌÊAFJĬÎÈAFJĬÎÈAFJĬGÈAFJĬĒÈAFJĨĒÈAFJÌÊAFJÎÎÈAFJÎÊAFJÎ FJÎHÊAFJÎGÊAFJÎEÂFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÊÊAFJIÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊ FJIIÊAFJIGÊAFJI€ÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHIÊAFJHHÊAFJHGÊAFJHFÊAFJH€È FJGJÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGIÊAFJGHÊAFJG€
G I €€ÀÒÁF∙cÀÙc	G€FIÈÅG€€ÎÈÅG€€IÈÅG€€HÈÅG€€FÈÅG€€€ÅFJJJÈÅFJJÎÈÅFJJÎÈÅFJJEÅFJJEÅFJJ€ÅFJJ€ÅFJÌÊÅ FJÌİÈÅFJÌFÅFJÌ€ÅFJÏÊÅFJÏİÉÅFJÏËÅFJÏËÅFJÏËÅFJÏEÅFJÎJËÅFJÎÌËÅFJÎÈÅFJÎÈÅFJÌË FJÌHÅFJÎGÅFJÎFÅFJ΀ÅFJIÎÊÅFJIÎÊÅFJIÎÊÅFJIÎÊÅFJIÎÊÅFJIÎÊÅFJIËÅFJIÊ FJIÌÊÅFJIÎÊÅFJIÎÊÅFJIÎÊÅFJIÎÊÅFJIËÅFJGÊÅFJGÎÊÅFJGÎÊ FJHHÅFJHGÅFJHFÅFJH€ÅFJGJÊÅFJGÌÊÅFJGĨÊÅFJGÎÊÅFJGIÊÅFJGHÅFJGHÊ
GI€€ÀÒÀF∙cÀÙc	G€FIÈ\GE€ÎÈ\GE€IÈ\GE€HÈ\GE€FÈ\GE€EÈ\FJJJÈ\FJJÎÈ\FJJÎÈ\FJJÊÈ\FJJĒÈ\FJJĒÈ\FJJĒÈ\FJ] FJÌÎÈ\FJÌFÈ\FJÌEÈ\FJĨÊ FJÎHÈ\FJÎÊ FJÎHÈ\FJÎÊ FJÎÈ\FJIÎÊ FJIÌÊ\FJIÎÊ FJIÎÊ FJHHÊ\FJHGÊ\FJHÊ KFJGÎÊ\FJHÊ KFJGÎÊ\FJGHÊ\FJGÊ KFJGÎÊ\FJGIÊ\FJGÊ KFJGÎÊ\FJGHÊ\FJGÊ KFJGÎÊ KFJGÎÊ KFJGÎÊ KFJGÊ
GI€HÁÒÁFÙV	G€FIÈ\G€F€È\G€€ÎÈ\G€€IÈ\G€€HÈ\G€€FÈ\G€€EÈ\FJJÈ\FJJÎÈ\FJJÎÈ\FJJÎÈ\FJJË\FJJÎÈ\FJ]ÎÈ FJÌ€È\FJĨÎÈ\FJĨÎÈ\FJĨÊÈ\FJĨEÈ\FJĨÈ\FJĨĨÈ\FJÎÎÈ\FJÎÎÈ\FJÎÎÈ\FJÎÎÈ\FJÎÎÈ\FJÎÊ FJÎÌÈ\FJÎÎÊ\FJÎÎÊ FJIIÊ\FJIÊ\FJIÎÊ FJIIÊ\FJIÊ\FJIÊ FJG]Ê\FJGÎÊ\FJGÎÊ\FJGÎÊ\FJGÎÊ\FJGÎÊ\FJGHÊ\FJGE FJG]Ê\FJGÎÊ\FJGÎÊ\FJGÎÊ\FJGÎÊ\FJGÎÊ\FJGÊ
GI€HÁÒÁFÙVÁÙV	G€FIÈÅG€F€ÈÅG€€IÈÅG€€HÈÅG€€FÈÅG€€EÅFJJJÈÅFJJÎÈÅFJJËÅFJJEÅFJJEÅFJJEÅFJ FJÌİÈÅFJÌFÅFJÌ€ÅFJÏİÈÅFJÏİÈÅFJÏGÅFJÏFÅFJÏ€ÅFJĴÌÈÅFJÎÌÈÅFJÌİÈÅFJÌ FJÌGÅFJÌFÅFJÌ€ÅFJİÎÈÅFJİİÈÅFJİİÈÅFJİİÈÅFJİ FJIİÊÅFJIİÊÅFJIƏÅFJI FJHFÅFJH€ÅFJGJÈÅFJGÌÈÅFJGÏÈÅFJGİÊÅFJGIÅFJGFÅFJG€€
GI€IÁÒÁFÙV	G€FIÈÅG€F€ËÅG€€ÎÈÅG€€IÈÅG€€HËÅG€€FËÅG€€EÅFJJËÅFJJÎËÅFJJÎËÅFJJËÅFJJËÅFJJËÅFJÌËÅFJÌËÅFJÌËÅFJÌËÅFJÌ

<u>5XXfYgg`FYgYUfW\YX</u>	5XXfYgg`Bch`=XYbh]Z]YX`]b`FYgYUfW\`GcifWY
GI€IÅÒÅFÙVÅÙV	G€FIÉAG€F€ÉAG€€ÎÉAG€€IÊAG€€HÊAG€€FÊAG€€EÊAFJJJÊAFJJÎÊAFJJÊAFJJGÊAFJJFÊAFJJ€Ê FJÌÎÊAFJÌÊAFJÌFÊAFJÌÊAFJÏÎÊAFJÏÎÊAFJÏGÊAFJÏÊAFJÏÊAFJÎÊAFJÎÊAFJÎÎÊAFJÎÎÊAFJÎ FJÎGÊAFJÎFÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊ FJIIÊAFJIGÊAFJIÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHIÊAFJHHÊAFJHGÊAFJHFÊAFJH€Ê FJGJÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGIÊAFJGHÊAFJGE€
GI€ÍÅÒÅFÙV	G€FIÈIG€F€ÈIG€€ÎÈIG€€IÈIG€€HÈIG€€FÈIG€€EÈIFJJÈIFJJÎÈIFJJÎÈIFJJGÈIFJJĒÈIFJJĒÈIFJ]ÎÈ A FJÌÎÉIFJÌEÈIFJÌ€ÈIFJÏÊÈIFJÏÎÈIFJÏÎÈIFJĨËÈIFJÎJÈIFJÎÏÈIFJÎËÎIFJÎËIFJÎÊ FJÎFÊIFJ΀ÈIFJÎÈIFJIÎÈIFJÎÎÈIFJÎÎÈIFJÎÎÈIFJÎÎÈIFJÎÊÈIFJIÊEIFJIÊE FJIÎÊIFJIÎÊIFJIIÊIFJIÊÊIFJIÊÊIFJIÊÊIFJHÎÊIFJHÎÊIFJHÎÊIFJHÊ FJHFÊIFJH€ÊIFJGJÊIFJGÌÊIFJGĨÊIFJGÎÊIFJGÎÊIFJGIÊIFJGEÊ
GI€ÍÅÒÁFÙVÅÙV	G€FIÈIG€F€ÈIG€€ÎÈIG€€IÈIG€€HÈIG€€FÈIG€€EÈIFJJÈIFJJÎÈIFJJÎÈIFJJGÈIFJJĒÈIFJJ€È FJÌÎÈIFJÌFÈIFJÌEÈIFJÌ€ÈIFJÏÎÈIFJÏÎÈIFJÏGÈIFJÏËÈIFJÏ€ÈIFJÏ€ÈIFJÌĒÈIFJÌÊIFJÌÈIFJÌÈIFJÌÈIFJÌÈIFJÌÈIFJÌÈIFJÌÈIFJÌÈ
GI€ÍÀÒÁF∙cÁÙc	G€€ÎÊÅG€€IÊÅG€€HÊÅG€€FÊÅG€€€ÅFJJJÊÅFJJÎÊÅFJJÎÊÅFJJÊÅFJJĒÅFJJĒÅFJÌÎÊÅFJÌÎÊÅFJÌÎÊÅFJÌÎÊÅFJÌÎÊÅFJÌÎÊÅFJÌÎÊÅFJÌÎÊÅFJÌÎÊÅFJÌÎÊÅFJÌÎÊÅFJÌÌÊÅFJÌÌÊÅFJÌÌÊÅFJÌÌÊÅFJÌÌÊÅFJÌÌÊÅFJÌÌÊÅFJÌÌÊÅFJÌÌÊÅFJÌÌÊÅFJÌÌÊÅFJÌÌÊÅFJÌÌÊÅFJÌÌÊÅFJÌÌÊÅFJÌÌÊÅFJIÌÊÅFJÌÌÊÅFJIÌÊÅFJÌÌÊÅFJÌÌÊÅFJIÌÊ
GI€ÍÀÒÀF∙cÀÙc	G€€ÎÊAG€€IÊAG€€HÊAG€€FÊAGE€€ÊAFJJJÊAFJJÎÊAFJJÎÊAFJJÊAFJJÊAFJJÊÊAFJÌÎÊAFJÌÎÊAFJÌÎÊAFJÌÎÊAFJÎ FJÎFÊAFJ΀ÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÊÊAFJÎÊAFJÎ
GI€ĨÅÒÅFÙ∨	G€FIÈIG€F€ÈIG€€ÎÈIG€€IÈIG€€HÈIG€€FÈIG€€EÈIFJJÈIFJJÎÈIFJJÎÈIFJJGÈIFJJĒÈIFJJ€È FJÌÎÈIFJÌEÈIFJÌ€ÈIFJÏÎÈIFJÏÎÈIFJÏËÈIFJĨ]ÈIFJÎÌÈIFJÎÏÈIFJÎÏÈIFJÎËIFJ]ÎÈIFJÌË FJÎGÈIFJÎFÈIFJ΀ÈIFJÎÌÈIFJĨÌÈIFJIÎÈIFJIÎÈIFJIÎÈIFJIÎÈIFJIÎÈIFJIÎÈIFJIÊ FJIĨÈIFJIÎÊIFJIÎÊIFJIÊİFJIÊ FJHEÊIFJGJÈIFJGÌÈIFJGĨÈIFJGÎÊIFJGÎÊIFJGFÊIFJG€
GI€ÏÅÒÅFÙVÅÙV	G€FIÉAG€F€ÉAG€€IÉAG€€HÉAG€€FÉAG€€€ÅFJJJÉAFJJÎÉAFJJŰÉAFJJGÉAFJJFÉAFJJ€ÁFJ]€ÅFJÌÉA FJÌÍÉAFJÌFÉAFJÌ€ÉAFJÏÎÉAFJÏŰÉAFJÏĞÉAFJÏFÉAFJÎJÉAFJÎÛÉAFJÎÛÉAFJÎÉAFJÎ FJÎGÊAFJÎFÊAFJ΀ÊAFJÎÎÊAFJĬÎÊAFJÍÎÊAFJIÎÊAFJÎÊAFJIÊAFJÎ FJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJÎÎÊAFJ FJHGÊAFJHFÊAFJHÊAFJGÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGIÊAFJGHÊAFJGHÊAFJGFÊAFJG€
GI€ÌÁÒÁFÙVÁÙV	G€FIÉAG€F€ÉAG€€ÎÉAG€€IÉAG€€HÉAG€€FÉAG€€EÊAFJJÉAFJJÎÊAFJJÎÉAFJJGÊAFJJFÉAFJJ€Â FJÌÎÊAFJÌIÊAFJÌEÊAFJÌÊAFJÏÎÊAFJÏÎÊAFJÏGÊAFJÏEÊAFJÏÊAFJÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊA FJÎIÊAFJÎÊAFJÎÊÊAFJÎÊÊAFJÎÊÊAFJÎÊÊAFJÎÊÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJIÎÊA FJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÊÊAFJIÊÊAFJÎÊÊAFJÎÎÊAFJAÎÊAFJHÎÊAFJHÎÊAFJHIÊAFJHIÊ FJHGÊAFJHFÊAFJH€ÊAFJGJÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGIÊAFJGEÊAFJGEÊ
GI€JÁFÐGÁÒÁFÙ∨	G€FIÈ\G€F€È\G€€ÎÈ\G€€IÈ\G€€HÈ\G€€FÈ\G€€EÈ\FJJÈ\FJJÎÈ\FJJÎÈ\FJJÊÈ\FJJËÈ\FJ]ÎÈ\ FJÌÎÈ\FJÌFÈ\FJÌ€È\FJĨÊ\FJĬÎÊ\FJĬÎÊ\FJĨË\FJĨË\FJĨIÊ\FJÎÈ\FJÎÊ FJÎHÊ\FJÎÊ FJÎHÊ\FJÎÊ FJIÌÊ\FJIÎÊ\FJIÎÊ\FJIÎÊ FJIÎÊ\FJIÎÊ\FJIÎÊ FJHHÊ\FJHGÊ\FJHFÊ\FJHÊ E\FJGÎÊ\FJGÎÊ\FJGÊ FJHHÊ\FJHGÊ\FJHÊ FJHHÊ\FJHGÊ\FJHÊ FJHHÊ\FJHGÊ\FJHÊ FJHHÊ\FJHGÊ\FJHÊ FJHHÊ\FJHGÊ\FJHÊ FJHHÊ\FJHGÊ
GI€JÁÒÁFÙ∨	G€FIÈkG€F€ÈkG€€ÎÈkG€€IÈkG€€FÈkG€€EÈkG€GEÈkFJJÈkFJJÎÈkFJJÊÈkFJJGÈkFJJĒÈkFJJ€È FJÌÎÈkFJĨÊÈkFJĨÎÈkFJĨÎÈkFJĨGÈkFJĨ€kFJĨJÈkFJÎĨÈkFJÎÎÈkFJÎÎÈkFJĨÌÈkFJĨ FJ΀ÈkFJĨÌÈkFJĨĨÈkFJĨÎÈkFJĨÎÈkFJĨË FJĨÎÊkFJIIÊkFJI€ÈkFJHJÈkFJHĨÈkFJHÎÊkFJHĨÊkFJHIÊkFJHGÈkFJH€ÈkFJGÌÈkFJGĨÈ FJGĨÊkFJGĨÊkFJGHÈkFJGEÈ
GI€JÁÒÁFÙVÁÙV	G€FIÈÅG€F€ÈÅG€€IÈÅG€€HÈÅG€€FÈÅG€€€ÅFJJJÈÅFJJÎÈÅFJJÎÈÅFJJEÅFJJEÅFJJ€ÅFJ] FJÌIÈÅFJÌFÈÅFJÌ€ÅFJÏIÈÅFJÏIÈÅFJÏGÅFJÏFÅFJÏEÅFJĴIÈÅFJÎIÈÅFJÎIÈÅFJI FJÎGĖÅFJÎFĖÅFJĨ€ÅFJIÏÈÅFJIÏÈÅFJIIÈÅFJIIÈÅFJI FJIIÈÅFJIIÈÅFJIIÈÅFJIEÅFJIE FJIFĖÅFJHEÅFJIEÅFJIGÅFJIEÅFJGIÊÅFJGIÊÅFJGIÊÅFJGFÅFJG€

5XXfYgg`FYgYUfW\YX	5XXfYgg`Bch`=XYbh]Z]YX`]b`FYgYUfW\`Gc i fWY
GIF€ÅÒÅFÙ∨	G€FIÈÅG€F€ÈÅG€€ÎÈÅG€€IÈÅG€€HĖÅG€€FËÅG€€EËÅFJJEÅFJJÎÈÅFJJÎÈÅFJJËÅFJJËÅFJJËÅFJÌËÅFJÌËÅFJÌËÅFJÌËÅFJÌË
GIF€ÅÒÁFÙVÅÙV	G€FIÉAG€F€ÊAG€€ÎÊAG€€IÊAG€€HÊAG€€FÊAG€€EÊAFJJÊAFJJÎÊAFJJÎÊAFJJGÊAFJJÊAFJJÊÂFJJÊÊAFJ FJÎÎÊAFJÎÊAFJÎFÊAFJÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÊÊAFJÎÊÊAFJÎÊAFJÎ
G I FFÁFÐGÁÐÁFÙV	G€FIÈ&G€F€È&G€€ÎÈ&G€€IÈ&G€€FË&G€€FË&G€€EË&FJJË&FJJÎÈ&FJJÎÈ&FJJË&FJJË&FJJË FJÌÎË&FJÌFË&FJÌ€Ë&FJÏÎË&FJÏÎË&FJÏË FJÎHË&FJÎGË&FJÎFË&FJÎÎË FJÎHË&FJÎGË&FJÎFË FJIÌË&FJIÎË FJIÌË FJIHË&FJHË FJHHË&FJHGË&FJHË &FJHË FJHHË FJHHË
GIFFÁÒÁFÙV	G€FIÈ\G€F€È\G€€ÎÈ\G€€IÈ\G€€HÈ\G€€FÈ\G€€EÈ\FJJÈ\FJJÊ\FJJÊ\FJJÊ\FJJÊ\FJJÊ\FJJÊ\FJ]Ê FJÌ€È\FJĨÊ\FJĨÊ\FJĨÊ\FJĨÊ\FJĨÊ\FJĨÊ\FJÎÊ\FJÎÊ\FJÎÊ\FJÎÊ\FJÎÊ\FJÎÊ\FJÎÊ FJÎÎÊ\FJÎÎÊ\FJÎÎÊ FJÎÎÊ\FJÎÊ\FJÎÎÊ FJIIÊ\FJHÊ\FJHĴÊ\FJHÎÊ\FJHÎÊ\FJHÎÊ\FJHÎÊ\FJHÊ\FJHÊ\FJH€ KFJGÎÊ\FJGHÊ\FJGFÊ\FJG€
G I FFÁÒÁFÙVÁÙV	G€FIÈAG€F€ÈAG€€ÎÈAG€€IÈAG€€EËAG€€EËAFJJÈAFJJĨÈAFJJÎÈAFJJGÈAFJJËÀFJJËAFJJËAFJJËAFJJË FJÌÎÈAFJÌËAFJÌËAFJÌËAFJĨËAFJĨÎÈAFJĨËAFJĨGËAFJĨËAFJĨËAFJĨËAFJĨËAFJĨËAFJĨËAFJĨËAFJĨ
G I FGÁÒÁFÙVÁÙV	G€FIÈÅG€F€ÈÅG€€ÎÈÅG€€IÈÅG€€EËÅG€€EËÅFJJÈÅFJJĨÈÅFJJĨÈÅFJJËÅFJJËÅFJJËÅFJJËÅFJJËÅFJJËÅFJJËÅFJIËÅFJĨËÅFJĨËÅFJĨËÅFJĨ FJĨËÅFJĨËÅFJĨËÅFJĨËÅFJĨËÅFJĨËÅFJĨËÅFJĨËÅ
G I FHÁÒÁFÙVÁÙV	G€FIÈ&G€F€È&G€€ÎÈ&G€€IÈ&G€€EË&G€€EË&G€€Ë&FUJUË&FUJÎÈ&FUJÊ&FUJÊ&FUJÊ&FUJÊ FJÎÎÊ&FJÎÊ&FJÎÊ&FJÎÊ FJÎIÊ&FJÎÊ FJÎIÊ&FJÎÊ FJÎÎÊ FJÎÎÊ FJIÎÊ FJIÎÊ FJIÎÊ FJIÊ FJHE FJHE FJHE FJHE FJHE FJHE FJHE FJHE
GIFÍÅÒÁFÙV	G€FIÊAG€F€ÊAG€€ÎÊAG€€IÊAG€€HÊAG€€FÊAG€€EÊAFJJÊAFJJÎÊAFJJÎÊAFJJÊÊAFJJÊÊAFJ FJÌ€ÊAFJĨÎÊAFJĨÎÊAFJÏGÊAFJĨ€ÊAFJÎJÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎ FJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÊAFJÎ FJÎÎÊAFJIÎÊAFJÎÎÊAFJÎÎÊAFJÎÎÊAFJÎÊAFJÎÊA FJIÎÊAFJIÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHEÊAFJH€ÊAFJGÎÊAFJGÎÊA FJGÎÊAFJGHÊAFJGFÊAFJG€
G I F Í ÁÒÁFÙVÁÙV	G€FIÈAG€F€ÈAG€€IÈAG€€HÈAG€€FÈAG€€€ÈAFJJJÈAFJJÎÈAFJJÎÈAFJJGÈAFJJFÈAFJJ€ÈAFJÌÊÈA FJÌÎÈAFJÌFÈAFJÌ€ÈAFJÏÎÈAFJÏÎÈAFJÏGÈAFJÏFÈAFJÌ€ÈAFJÎJÈAFJÎÎÈAFJÎÎÈAFJÎ FJÎGÊAFJÎFÈAFJ΀ÈAFJÎÎÈAFJÎÎÈAFJÎÎÊAFJÎ FJIÎÊAFJIIÊAFJIGÊAFJI€ÈAFJHÌÈAFJHÎÊAFJHÎÊAFJHÎÊAFJHIÊAFJHHÊAFJHGÊAFJHFÊ FJH€ÊAFJGJÊAFJGÌÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGIÊAFJGFÊAFJG€
G I F Î ÂFBGÂ ÔĂFÙV	G€FIÈÅG€F€ÈÅG€€ÎÈÅG€€IÈÅG€€EËÅG€€EËÅFJJÈÅFJJĨÈÅFJJĨÈÅFJJGÅFJJËÅFJJËÅFJJËÅFJJËÅFJJËÅFJJËÅFJIËÅFJĨËÅFJĨËÅFJĨËÅFJĨ FJĨHĖÅFJĨËÅFJĨËÅFJĨËÅFJĨĨËÅFJĨËÅFJĨËÅFJĨËÅFJĨ
GIFÎÅÒÅFÙV	G€FIÈÅG€F€ÈÅG€€ÎÈÅG€€IÈÅG€€HĖÅG€€FËÅG€€ËÅFJJJËÅFJJÎÈÅFJJÉÅFJJGÅÅFJJFÅÅFJÌËÅ FJÌ€ÅFJÏÎÈÅFJÏIÉÅFJÏGÅFJÏ€ÅFJÎJËÅFJÎÌËÅFJÎÌËÅFJÎÌËÅFJÎIËÅFJÎHÅÆJÌË FJÍÌÈÅFJIÎÈÅFJIÎÈÅFJIÎËÅFJI FJIIËÅFJIEÅFJIIËÅFJIÎËÅFJIÎË FJIIËÅFJIEÅFJGËÅFJGËÅFJG€

<u>5XXfYgg`FYgYUfW\YX</u>	5XXfYgg`Bch`=XYbh]Z]YX`]b`FYgYUfW\`Gc i fWY
GIFÎÂŎŔFÙVÂÙV	G€FIÈAG€F€ÈAG€€IÈAG€€HÈAG€€FÈAG€€€ÈAFJJJÈAFJJÎÈAFJJÎÈAFJJGÈAFJJFÈAFJJ€ÈAFJÌÊ À FJÌÎÉAFJÌFÈAFJÌ€ÈAFJÏÎÈAFJÏ[ÈAFJÏGÈAFJÏFÈAFJÎGÈAFJÎGÈAFJÎ]ÊAFJÎÎÈAFJÎ FJÎGÊAFJÎFÊAFJ΀ÈAFJÎÎÈAFJÎÎÈAFJÎÎÊAFJÎÎÊAFJÎ FJIÎÊAFJIÎÊAFJI]ÊAFJIGÈAFJIÊAFJH]ÊAFJHÎÊAFJHÎÊAFJHÎÊAFJHIÊAFJHHÊAFJHHÊA FJHFÊAFJH€ÊAFJGJÊAFJGÌÊAFJGÎÊAFJGÎÊAFJGIÊAFJGHÊAFJGFÊAFJG€
GIFĨÁÒÁFÙV	G€FIÈIG€F€ÈIG€€ÎÈIG€€IÈIGE€HÈIGE€EÈIGE€EÈIFJJÈIFJJÎÈIFJJÎÈIFJJGÈIFJJĒÈIFJJĒÈIFJ]ÈÈ FJÌ€ÈIFJĨÎÈIFJĨIÈIFJĨGÈIFJĨ€ÈIFJĨĖÈIFJÎËÈIFJÎÎÈIFJÎÎÈIFJÎIÈIFJĨIÈIFJĨĒÈIFJĨĒÈ FJÍÌÈIFJĨĨÈIFJĨÎÈIFJĨĒÈIFJĨĒÈIFJĨĒÈIFJIĒÈIFJIĒÈIFJIÈIFJIĒÈIFJIĒÈIFJIĒÈIFJIĒÈIFJIĒÈIFJIĒÈIFJIĒÈIFJIĒÈIFJGĒÈIFJGĒ FJĨÌÈIFJGĨÈIFJGĨĖIFJGĨÈIFJGHÈIFJGĒÈIFJG€
GIFÏÅÒÁFÙVÅÙV	G€FIÈÅG€F€ÈÅG€€IÈÅG€€FÈÅG€€EÅFJJJÈÅFJJÎÈÅFJJÎÈÅFJJEÅFJJEÅFJJEÅFJJEÅFJ] FJÌİÈÅFJÌFÅFJÌ€ÅFJÏÊÅFJÏİÈÅFJÏGÅFJÏFÅFJÏEÅFJĴEÅFJĴÈÅFJĴÈÅFJÌÈÅFJÌÈÅFJÌÈÅFJÌ FJÎGÅFJÎFÅFJÌ€ÅFJİÎÈÅFJĬÏÈÅFJĬİÊÅFJĬIÈÅFJÏEÅFJI FJIÎÊÅFJIİÊÅFJIEÅFJIËÅFJIËÅFJIË FJIËÅFJIËÅFJIIÊÅFJIËÅFJGËÅFJGËÅFJGËÅFJGËÅFJGËÅFJGE FJHEÅFJH€ÅFJGJÊÅFJGÌÊÅFJGËÅFJGÏÊÅFJG
g i f ì àòáfùváùv	G€FIÈÅG€F€ÈÅG€€ÎÈÅG€€IÈÅG€€FËÅG€€FËÅG€€EËÅFJJËÅFJJĨÈÅFJJÎÈÅFJJËÅFJJËÅFJJËÅFJJËÅFJJËÅFJJËÅFJĨËÅFJĨË
G I FJÁFÐGÁÐÁFÙV	G€FIÈÅG€F€ÈÅG€€ÎÈÅG€€IÈÅG€€FËÅG€€FËÅG€€EÅFJJËÅFJJÎÈÅFJJÎÈÅFJJËÅFJJËÅFJJËÅFJJËÅFJJËÅFJJËÅFJË FJÌÎËÅFJÌFËÅFJÌ€ÅFJÏÎËÅFJÏÎËÅFJÏËÅFJÏË FJÌHËÅFJÎGËÅFJÎFËÅFJÎ EÅFJIÌËÅFJIÎËÅFJIÎËÅFJI FJIÌËÅFJIÏËÅFJIÎËÅFJIÎËÅFJIË FJHHËÅFJHGÅFJHFËÅFJGËÅFJGJËÅFJGÏËÅFJGÎËÅFJGIËÅFJGIËÅFJGHËÅFJGË ÅFJGIË
GIFJÁÒÁFÙV	G€FIÈÅG€F€ÈÅG€€ÎÈÅG€€IÈÅG€€HĖÅG€€FÈÅG€€EÅFJJÈÅFJJÎÈÅFJJÎÈÅFJJGÈÅFJJEÅFJJ€Å FJÌÎÈÅFJĨÈÅFJĨÎÈÅFJĨÎÈÅFJĨGĖÅFJĨ€ÅFJĨJÈÅFJÎÌÈÅFJÎÎÈÅFJÎÎÈÅFJÎÌÈÅFJĨÌÈÅFJĨÌÈÅFJÎÈÅFJÎ FJ΀ÈÅFJÍÌÈÅFJIĨÈÅFJÍÎĖÅFJÍÎĖÅFJIÎĖÅFJIÎEÅFJÍEÅFJIÊÅFJIÌÈÅFJIÌÈÅFJIÌÈÅFJIÌÈ FJIĨĖÅFJIIÈÅFJIEÅFJHJĖÅFJHJÈÅFJHÎÈÅFJHIÈÅFJHIÈÅFJHHĖÅFJHGÈÅFJHFĖÅFJH€ÅFJGÌÈÅ FJGĨĖÅFJGÎĖÅFJGIĖÅFJGIĖÅFJGHĖÅFJGFĖÅFJG€
GIFJÁÒÁFÙVÁÙV	G€FIÈÅG€F€ÈÅG€€IÈÅG€€FÈÅG€€EÅFJJJÈÅFJJÎÈÅFJJÎÈÅFJJGÈÅFJJFÈÅFJJ€ÅFJÌÈÅ FJÌİÈÅFJÌFÅFJÌ€ÅFJÏÊÅFJÏİÈÅFJÏGÈÅFJÏFÅFJÏEÅFJÎEÅFJÎÈÅFJÎÈÅFJÌÈÅFJÌÈÅFJÌÈÅFJÌÈÅFJÌÈÅFJÌÈÅ FJÎGÅFJÎFÅFJ΀ÅFJİÎÈÅFJÍÏÈÅFJÍÌÈÅFJIİÈÅFJÍEÅFJÍGÅFJIİÈÅFJIÈÅFJIÈÅFJIÌÈÅFJIÌÈÅ FJIÎÊÅFJIİÊÅFJIEÅFJIGÈÅFJGËÅFJGĨÈÅFJGÏÊÅFJGÏÊÅFJGIÅÅFJGFÊÅFJG€
GIG€ÁÒÁFÙ∨	G€FIÈÅG€F€ÈÅG€€ÎÈÅG€€IÈÅG€€HĖÅG€€FÈÅG€€EÅFJJÈÅFJJÎÈÅFJJÎÈÅFJJGÈÅFJJEÅFJJEÅFJJEÅ FJÌÎÈÅFJÌ€ÅFJÏÎÈÅFJÏÎÈÅFJÏGÈÅFJÏ€ÅFJĨJÈÅFJÎÌÈÅFJÎÎÈÅFJÎÎÈÅFJÎÌÈÅFJÎÌÈÅFJÏÌÈÅFJIÌÈÅ FJ΀ÅFJIÌÈÅFJIÎÈÅFJIÎÈÅFJIÎÈÅFJIÎÈÅFJIÎÈÅFJIÎÈÅFJIÎÈÅFJIÌÈÅFJIÌÈÅFJIÌÈÅFJIÌÈ FJIÎÉÅFJIIÈÅFJIGÏÈÅFJGËÅFJGIÊÅFJGFÅFJGEÅFJG€
GIG€ÁÒÁFÙVÁÙV	G€FIÈÅG€F€ÈÅG€€IÈÅG€€FÈÅG€€EÅFJJJÈÅFJJÎÈÅFJJÎÈÅFJJEÅFJJEÅFJJEÅFJJEÅFJ] FJÌÍÈÅFJÌFÅFJÌ€ÅFJÏÊÅFJÏÎÉÅFJÏGÅFJÏFÅFJÏEÅFJĴEÅFJĴÈÅFJĴÈÅFJÌÈÅFJÌÈÅFJÌÈÅFJÌ FJĴGÅFJĴFÅFJÌ€ÅFJÍËÅFJÍĨÈÅFJÍÌÉÅFJĬËÅFJĬEÅFJÍEÅFJÍ€ÅFJIÈÅFJIÈÅFJIÌÈÅFJIÌÈÅFJIÌÈÅ FJIÎÅFJIÍÊÅFJIEÅFJI€ÅFJGËÅFJGĨÈÅFJGĨÈÅFJGĨÅFJGIÅFJGFÅFJG€
G I GFÁHÐ I Á Ó ÁFÙ V	G€FIÈÅG€F€ÈÅG€€ÎÈÅG€€IÈÅG€€FËÅG€€FËÅG€€EÅFJJËÅFJJÎÅFJJÎÈÅFJJËÅFJJËÅFJJËÅFJJËÅFJJËÅFJJËÅFJ FJÌÎËÅFJÌFÅFJÌ€ÅFJÏÎËÅFJÏÎËÅFJÏËÅFJÏË FJÌHËÅFJÎGÅFJÎFÅFJ΀ÅFJIÎËÅFJĨĨËÅFJĨIËÅFJĨIËÅFJĨIËÅFJĨIËÅFJĨË FJIÌËÅFJIĨËÅFJIÎËÅFJIÎËÅFJI FJHHËÅFJHGÅFJHFËÅFJGJËÅFJGÌËÅFJGĨËÅFJGÎËÅFJGIËÅFJGIËÅFJGHËÅFJGË ÅFJGIË
G I GFÁÒÁFÙVÁÙV	G€FIÈÅG€F€ÈÅG€€IÈÅG€€FÈÅG€€EÅFJJJÈÅFJJÎÈÅFJJÎÈÅFJJEÅFJJEÅFJJ€ÅFJJ€ÅFJ] FJÌİÈÅFJÌFÅFJÌ€ÅFJÏÊÅFJÏİÈÅFJÏGÅFJÏFÅFJÏEÅFJĴIÈÅFJÎJÅFJÌËÅFJÌËÅFJÌË FJÌHĖÅFJÎGÅFJÌFÈÅFJ΀ÅFJIÎÈÅFJIÎÈÅFJIÏÈÅFJĬIÈÅFJĬIÈÅFJIËÅFJIË FJIÌÈÅFJIĨÊÅFJIÎÊÅFJI FJHHĖÅFJHGÅFJHFÅFJH€ÅFJGJÈÅFJGÌÈÅFJGĨÈÅFJGIÊÅFJGIËÅFJGHÅFJGFÅFJG FJHHĖÅFJHGÅFJHFÅFJH€ÅFJGJĖÅFJGÌÊ

<u>5XXfYgg`FYgYUfW\YX</u>	5XXfYgg`Bch`=XYbh]Z]YX`]b`FYgYUfW\`GcifWY
G I GGÁÒÁFÙV	G€FIÈÅG€FÈÈÅG€€ÎÈÅG€€IÈÅG€€HÈÅG€€FÈÅG€€EÅFJJDÅFJJÎÈÅFJJÊÅFJJGÅÅFJJEÅFJÌÈÅ FJÌ€ÅFJĨÎÈÅFJĨÍÈÅFJĨĞÅFJĨFÅFJĨ€ÅFJĨJÉÅFJÎÌÈÅFJÎÌÈÅFJÎÎÈÅFJĨÌÈÅFJĨÌÈÅ FJÎFÈÅFJĨ€ÅFJĨÌÈÅFJĨĨÈÅFJĨĨÈÅFJĨÌÈÅFJĨÌÉÅFJÎÌÈÅFJÎÎÈÅFJIÌÈÅFJIJÈÅFJIÌÈÅ FJIÎÈÅFJIÎÉÅFJIIÈÅFJIĨÈÅFJI FJH€ÅFJGJĖÅFJGÌÈÅFJGĨÈÅFJGĨÈÅFJGIÊÅFJGIÊÅFJGFÅFJG€
G I GHÁÒÁFÙV	G€FIÈIG€F€ÈIG€€ÎÈIG€€IÈIG€€HÈIG€€FÈIG€€€ÈIFJJÈIFJJÎÈIFJJÎÈIFJJGÈIFJJĒÈIFJ]ÈÈIFJÌÈÈ FJÌ€ÈIFJÏÎÈIFJĨİÈIFJÏGÈIFJÏ€ÈIFJĨGÈIFJĨÈIFJÎÎÈIFJÎÎÈIFJÎÌÈIFJĨÈIFJĨÈÈIFJĨÈÈIFJÎÊ FJÍÌÈIFJIÎÈIFJIÎÈIFJIÎÈIFJIÎÈIFJIÎÈIFJIÎÈIFJIÎÈIFJIÌÈIFJIÌÈIFJIÎÈIFJIÎÈIFJIÎÈ FJIÎÈIFJGÊIFJIEÈIFJHJÈIFJHÌÈIFJHÎÈIFJHÎÈIFJHIÊIFJHIÈIFJHEÈIFJGÌÈIFJGĨÈ I FJGÎÈIFJGÉIFJGHÈIFJGEÊ
G I GHÁÒÁFÙVÁÙV	G€FIÈIG€F€ÈIG€€IÈIG€€EÈIG€€EÈIGE€€ÈIFJJJÈIFJJÎÈIFJJÈIFJJĒÈIFJJĒÈIFJJĒÈIFJJĒÈIFJJĒÈIFJÌĒÈ FJÌĒÈIFJÌEÈIFJÌ€ÈIFJÏÊÈIFJÏĒÈIFJĨËÈIFJĨĒÈIFJĨĒÈIFJÎÈIFJÌĒÈIFJÌĒÈIFJÌĒÈIFJÌÈÈIFJÌÈÈIFJÌÈÈIFJÌÈ FJĨĒÈIFJĨĒÈIFJIĒÈIFJIĒÈIFJIĒÈIFJIĨÈIFJIĨÈÈIFJIĒÈIFJIĒÈIFJIĒÈIFJIĒÈIFJIĒÈIFJIĒÈIFJIĒÈIFJIĒÈIFJIĒÈIFJIĒÈIFJIĒÈIF FJHĒÈIFJHĒÈIFJGÈÈIFJGÌÈIFJGĨÈIFJGĨÈIFJGĨÈIFJGIÈIFJGEÈIFJG€
G I G Í ÁÐÁFÙVÁÙV	G€FIÈIG€F€ÈIG€€ÎÈIG€€IÈIG€€EÈIG€€EÈIGE€€ÈIFJJÈIFJJÎÈIFJJÊÈIFJJEÈIFJJEÈIFJJEÈIFJJ€È FJÌÎÈIFJÌÉİFJÌEÈIFJÌ€ÈIFJĨÊİFJĨÎÈIFJĨËÈIFJĨËÈIFJĨÈÈIFJĨÈÈIFJĨÈÈIFJĨÈÈIFJÎÊ FJÎIÈIFJĨÊÈIFJÎÊÈIFJÎÊÈIFJ΀ÈIFJÎÊÈIFJÎÈIFJIÎÈIFJIÎÈIFJIÊÈIFJIÊÈIFJIÊÈIFJIÊ FJIĨÈIFJIÎÈIFJIÎÊIFJIÎÊIFJIÊÈIFJIÊÈIFJIÊÈIFJIÊÈIFJHÌÈIFJHIÊIFJHIÊIFJHIÊ FJHEÊIFJHFÊIFJH€ÈIFJGJÊIFJGÌÊIFJGĨÊIFJGÎÊIFJGIÊIFJGIÊIFJGEÊIFJGE
G I G Î ÁÒÁFÙVÁÙV	G€FIÈAG€FEÈAG€€ÎÈAG€€IÈAG€€FÈAG€€EÈAFJJÈAFJJÎÈAFJJÎÈAFJJEÀFJJĒÀFJJĒÀFJJĒÀFJJĒÀFJJĒÀFJ FJÌÎÈAFJÌÊAFJÌĒÀFJÌÊAFJĨÎÈAFJĨÎÈAFJĨËAFJĨËAFJĨĒAFJĨĒAFJĨĒAFJĨÈAFJĨÈAFJĨÈAFJĨ FJĨIÈAFJÎĤÈAFJÎĜAFJÎĒAFJĨĒAFJĨĨÈAFJĨĨÈAFJĨĨÈAFJĨĒAFJĨĒAFJIÎÈAFJI FJIĨÈAFJIÎÈAFJIÎÈAFJIĒAFJI EAFJIĨÈAFJIÎÊAFJIÎÊAFJI FJHGÊAFJHFÊAFJHĒAFJGJÊAFJGĨÊAFJGĨÊAFJGIÊAFJGIÊAFJGEÊAFJG€
G I G Ï ÁÐÁFÙV	G€FIÈIG€F€ÈIG€€ÎÈIG€€IÈIG€€FÈIG€€EÈIFJJÈIFJJÎÈIFJJÎÈIFJJÊİFJJĒÈIFJJĒÈIFJJĒÈIFJJĒÈ FJÌÎÈIFJÌÎÈIFJÌĒÈIFJÌ€ÈIFJĬÎÈIFJĬÎÈIFJĬÎÈIFJĨ]ËIFJÎÈIFJÎÈIFJÎÊ FJÎHÊIFJÎĒÈIFJ΀ÈIFJÎÊÊIFJÎÎÈIFJÎÎÊIFJÎÎÊ FJIĨÊIFJIÎÊIFJIÎÊIFJIÊÎFJIEÊIFJHÊÎFJHÎÊIFJHÎÊIFJHIÊIFJHGÊIFJHEÊI FJGÎÊIFJGĨÊIFJGÎÊIFJGÎÊIFJGHÊIFJGEÊIFJG€
G I G Ï ÁÐÁFÙVÁÙV	G€FIÈ&G€F€È&GE€IÈ&G€€EÈ&G€€EÈ&G€€È&FJJJÈ&FJJÊ&FJJGÈ&FJJFÈ&FJJ€È&FJJ€È&FJÌÊÈ FJÌÉ&FJÌEÈ&FJÌ€È&FJÏÊÈ&FJÏÉ&FJĨGÈ&FJĨ€È&FJÎEÈ&FJÎÈ&FJÎÊ FJÎGÊ&FJÎÊE&FJ΀È&FJĨÊ FJIÊÈ&FJIÊ&FJIÊ FJIÎÊ&FJIÎÊ FJHÊÊ FJHÊÊFJH€Ê&FJGĴÊ&FJGĨÊ&FJGĨÊ&FJGĨÊ&FJGÎÊ FJHÊÊ
GIHFÁÒÁFÙV	G€FIÈIG€F€ÈIG€€ÎÈIG€€IÈIG€€HÈIG€€FÈIG€€€ÈIFJJÈIFJJÎÈIFJJÎÈIFJJGÈIFJJFÈIFJÌÎÈ Å FJÌÎÉIFJÌ€ÈIFJĨÎÈIFJĨÎÈIFJĨGÈIFJĨFÈIFJĨ€ÈIFJÎJÈIFJÎÎÈIFJÎÎÈIFJÎÎÈIFJÎÎÈIFJÎÎÈIFJÎ FIĴFÊIFJĨ€ÈIFJÎÌÈIFJĨÎÈIFJĨÎÈIFJÎÎÈIFJÎÎÈIFJÎÎÈIFJÎÊÈIFJIÊÈIFJIÊ FJIÎÊIFJIÎÊIFJIÎÈIFJIEÊIFJHEÈIFJHÈIFJHÎÊIFJHÎÊIFJHIÊIFJHGÊIFJHEÊIFJH€ÈIFJGÌÈ Å FJGĨÊIFJGÎÊIFJGÎÊIFJGHÊIFJGFÊIFJG€
G I HFÁÒÁFÙVÁÙV	G€FIÈ&G€F€È&GE€EIÈ&G€€EÈ&G€€EÈ&G€€Ë&FJJJÈ&FJJÊ&FJJGÈ&FJJFÈ&FJJ€È&FJJ€È&FJÌÊÈ FJÌÉ&FJÌEÈ&FJÌ€È&FJÏÊÈ&FJÏÉ&FJĨGÈ&FJĨË&FJĨ€È&FJÎDÈ&FJÎÊE FJÎGÊ&FJÎÊE&FJ΀È&FJĨÊ FJIÊÈ&FJIÊ&FJIÊ FJIÎÊ&FJIÎÊ FJHFÊ&FJH€Ê&FJGÊ&FJGÎÊ&FJGĨÊ&FJGÎÊ&FJGÎÊ FJHFÊ&FJH€Ê&FJGÊ&FJGÎÊ&FJGÎÊ FJHFÊ&FJH€Ê
G I H Í ÁÐÁFÙV	G€FIÈ&G€F€È&G€€ÎÈ&G€€IÈ&G€€FÈ&G€€EË&G€€EË&FJJÈ&FJJÎÈ&FJJË&FJJË&FJJË FJÌ€È&FJĨÎÈ&FJĨÉ&FJĨGÈ&FJĨ€Ë&FJĨĴÈ&FJÎĨÈ&FJÎÊ&FJÎÎÈ&FJÎİÊ FJÎÌÈ&FJĨÎÈ&FJÎÎÈ&FJÎÎÈ&FJÎÎÊ FJIÎÈ&FJIÎÊ FJIÎÊ&FJIÎÊ FJGÎÊ&FJGIÊ&FJGHÊ&FJGÊ FJGÎÊ&FJGIÊ&FJGÊ
G I H Í ÁÐÁFÙ VÁÙ V	G€FIÈÅG€F€ËÅG€€ÎÈÅG€€IËÅG€€HËÅG€€FËÅG€€ËÅFJJJËÅFJJÎËÅFJJËÅFJJËÅFJJËÅFJJËÅFJJËÅF

<u>5XXfYgg`FYgYUfW\YX</u>	5XXfYgg`Bch`=XYbh]Z]YX`]b`FYgYUfW\`GcifWY
GÍ€FÅÒÁFÙVÅÙV	G€FIÈÅG€FEÈÅG€€ÎÈÅG€€IÈÅG€€HÈÅG€€FËÅG€€EÅFJJDÈÅFJJÎÈÅFJJÊÅFJJGËÅFJJFÅFJJÊ FJÌÎÈÅFJÌËÅFJÌFÅFJÌ€ÅFJÏÎÈÅFJÏÎÈÅFJÏËÅFJÏËÅFJÏËÅFJÏËÅFJĴËÅFJĴËÅFJĴËÅFJĨÈÅFJĨÈÅ FJÎIÈÅFJÎHÊÅFJÎÊÅFJĨÊÅFJĨÊÅFJĨÊ FJIĨÈÅFJIÎÊÅFJIÊÅFJIÊ AFJIËÅFJIÎÊ FJIËÅFJHËÅFJHÊ AFJHGÅFJHFÊ AFJGÊÅFJGÊ AFJGÎÊ AFJGÎÊ AFJGÊ AFJJÊ AFJ AFJA AFJA
GÍ€ÍÅÒÅFÙVÅÙV	G€FIÈÅG€FEÈÅG€€ÎÈÅG€€IÈÅG€€HÈÅG€€FÈÅG€€EÅFJJJÈÅFJJĨÈÅFJJËÅFJJGÈÅFJJFÅFJJEÅÅFJË FJÌÎÈÅFJÌFÅFJÌEÅFJÌÊÅFJÏÎÈÅFJÏÎÉÅFJÏGÅÅFJÏËÅÅFJÏËÅÅFJÏËÅÅFJÏË FJÎIÈÅFJÎÊÅFJÎÊÅFJÎÊÅFJÎÊ FJIÎÈÅFJIÎÊÅFJIÎÊÅFJIÊÅFJIÊ FJIËÅFJIÎÊÅFJIÎÊÅFJIÊÅFJIÊ FJHGÅFJHFÊÅFJGÊÅFJGÌÊÅFJGÎÊÅFJGÎÊÅFJGIÊ ÅFJGÊÅFJGEÅFJGEÊ FJHGÊ
GÍ€ÌÅÒÅFÙVÅÙV	G€FIÈ&G€FEÈ&GE€ÎÈ&GE€IÈ&GE€ELÈ&GE€ELÈ&GE€EÈ&FEÈ&GE€EÈ&FEÙJJÈÀFJJÎÈ&FJJGÈ&FJJEÈ&FJJEÈ FJÌÎÈ&FJÌIÈ&FJÌIÈ&FJÏÎÈ&FJĬÎÈ&FJĬGÈ&FJÏEÈ&FJÎJÈ&FJÎEÀFJÎIÈ&FJÎÈ FJÎHÊ&FJÎGÊ&FJÎFÊ&FJÎÊ EXFJIÊ FJIÌÊ&FJIÎÊ&FJIÎÊ FJHHÊ&FJHGÊ&FJHFÊ&FJHEÊ &FJHHÊ&FJHGÊ&FJHFÊ&FJGJÊ &FJHHÊ&FJHGÊ&FJHFÊ &FJHHÊ&FJHGÊ &FJHHÊ
G Í FFÁÒÁFÙVÁÙV	GEFIÈAGEFEÈAGEEÎÈAGEEIÈAGEEHÈAGEEEÈAGEEEÈAFJJÈAFJJÎÈAFJJÎÈAFJJEÀFJJEÀFJJEÈAFJ FJÌÎÈAFJÌEÀAFJÌEÀAFJĨÎÈAFJĨÎÈAFJĨÎÈAFJĨGÈAFJÏEÈAFJĨEÈAFJÎEÈAFJÎJÈAFJÎÎÈAFJÎÎÈAFJÎÎÈAFJÎÎÈAFJÎ FJÎIÈAFJÎÎÊAFJÎÊAFJÎÊÊAFJÎÊÊAFJÎÊÊAFJÎÊÊAFJÎÊÊAFJÎÊÊAFJÎÊÊAFJÎÊÊAFJÎÊÊAFJIÊ FJIÎÊAFJIÎÊAFJIÎÊAFJIÎÊAFJIÊÊAFJÎÊÊAFJÎÊÊAFJÎÎÊAFJÎÊÂAFJHÎÊAFJHÎÊAFJHÎÊAFJHÊ FJHGÊAFJHEÊAFJGÊÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGÎÊAFJGIÊAFJGEÊAFJGEÊ
G Í F Í ÁÒÁFÙVÁÙV	G€FIÈÅG€F€ÈÅG€€ÎÈÅG€€IÈÅG€€HÈÅG€€FÈÅG€€EÅFJJDÅFJJĨÈÅFJJËÅFJJGÅFJJFÅFJJ€Å FJÌÎÈÅFJÌEÅFJÌEÅFJÌÊÅFJĬÎÈÅFJĬÎÉÅFJĬGÅFJĬËÅFJĬËÅFJĬËÅFJĨËÅFJĨËÅFJÌË FJÎIÊÅFJÎGÅFJÎÊÅFJÎÊÅFJÎÎÈÅFJĬÎÊÅFJĬÎÊÅFJĬÎÊÅFJI FJIÎÊÅFJIÎÊÅFJIÎÊÅFJIÊÅFJIÎÊÅFJIÎÊÅFJIÎÊ FJIÊÅFJHËÅFJHÊÅFJIÊÅFJGÎÊÅFJGÎÊÅFJGÎÊÅFJGÎÊÅFJGEÅFJG€
G Í G I ÁÒÁFÙVÁÙV	G€FIÈJG€F€ÈJG€€ÎÈJG€€IÈJG€€HÈJG€€FÈJG€€€ÈJFJJÈÅFJJÎÈÅFJJÎÈÅFJJËÅFJJËÅFJJËÅFJJËÅFJJËÅFJ FJÌÎÈJFJÌEÅFJÌEÅFJÌËÅFJĬÎÈÅFJĬÎÈÅFJĬËÅFJĬËÅFJĬËÅFJĬË FJÎIĖJFJÎHÅFJÎGÅFJÎÊÅFJÎÊ FJIĨĖJFJIÎÊ FJIĨĖJFJIÎÊ FJHEÅFJIIÊ AFJIËÅFJHÊ AFJGÊ AFJGË AFJJË AFJË AF
GÍGÍÀÒÁFÙVÀÙV	G€FIÈÅG€FEÈÅG€€ÎÈÅG€€IÈÅG€€FËÅG€€FËÅG€€EÅFJJËÅFJJĨÈÅFJJËÅFJJËÅFJJËÅFJJËÅFJJËÅFJJËÅFJĨËÅFJĨË



#### PHASE I INTERVIEW QUESTIONNAIRE

The purpose of this questionnaire is to obtain information from knowledgeable individuals regarding the site. This questionnaire will become part of the Phase I ESA report.

#### A. SITE INFORMATION

Project Number: \_\_\_\_\_ Site Name/Reference: \_\_\_\_\_ Site Location: 119 and 121 South Soto Street, Los Angeles California, 90033 (APN 5183-009-904 and 5183-009-907)

#### B. INTERVIEW INFORMATION

Date/Time:	□ In Person
Interviewer:	□ By Telephone, Number:
Person Interviewed: Andrew Quinn	□ By Facsimile, Number:
Title/Company: Senior Environmental Specialist	
/LA Metro	□ By E-mail, address: <u>quinna@metro.net</u>

- 1. What is your relationship to the site? I am a Senior Environmental Specialist at LA Metro, the current owner of this site. I assist the Real Estate and Joint Development Team in conducting environmental reviews of project sites.
- 2. Do you have good knowledge regarding the uses and physical characteristics of the site? ☑ Yes
  - □ No If not, who does?\_\_\_\_\_ Phone Number: \_\_\_\_\_
- 3. Do you have good knowledge regarding the activities/processes conducted at the site?
  ☑ Yes
  ☑ No If not, who does?\_\_\_\_\_ Phone Number: \_\_\_\_\_
- C. PROPERTY INFORMATION
- 1. To the best of your knowledge, what are the current and past uses of the site? Please describe with approximate dates.

The site is owned by LA Metro. The site and the adjoining property were acquired and developed as part of the Gold Line Eastside Extension, which was completed and opened for service on November 15, 2009. The properties were acquired by Metro in 2002. Since construction, the sites have been used as a Metro parking lot. Prior to that, the site use was residential, dating back to the early 1900's.

2. To the best of your knowledge, what are the current and past uses of the adjoining properties? <u>The adjoining property to the north consists of a Metro station and plaza area. This was constructed and opened for service on November 15, 2009. The past use of the site was as a parking lot or car mechanic.</u> <u>The majority of the other adjoining properties were and are residential, dating back to the early 1900's.</u>

#### PHASE I INTERVIEW QUESTIONNAIRE Page 2 of 7

Fo the	best of your knowledge, what are the current and past uses in the surrounding area?
Street.	
Are the other su	re currently, or have there been in the past, any surface water bodies such as creeks or strourface drainage on or adjacent to the site? Metro's knowledge
Any his Not to I	storical or current pools of liquid noted? Source? Location? Describe. Metro's knowledge
Any his	storical or current standing water noted? Source? Location? Describe. Metro's knowledge
Are the	ere any waste water discharges (including storm water) to a drain, ditch, or stream on the

8. Are there currently, or have there been in the past, any wells (e.g. water, oil, gas, irrigation, injection, abandoned), pits, clarifiers, cisterns, cesspools, or similar receptacles noted where liquids drain, collect or are stored (sumps) that are likely to contain hazardous substances or petroleum products on the site or adjacent properties?

Not to Metro's knowledge

9. Identify the source of potable water on the site. LADWP connection

10. Identify the sewage disposal system on the site (type and age).

## PHASE I INTERVIEW QUESTIONNAIRE

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## LADWP connection 11. Is there any historical or current solid waste disposal on site? Describe. Not to Metro's knowledge 12. Is there any historical or current unnatural fill or grading, particularly fill of unknown origin? Describe. No, site was level when Metro acquired it as it was previously a residential site. Is there any historical or currently stained soil or pavement? Describe. 13. Not to Metro's knowledge 14. Is there any historical or current stressed vegetation noted (other than caused by drought)? Describe. Not to Metro's knowledge 15. To your knowledge, are there or have there been: TYes X No Hazardous substances on the site? Petroleum products on the site? TYes X No If current uses involve hazardous substances or petroleum products, please identify the type, quantity and storage conditions of those substances.

Hazardous Substance or Petroleum Products	Location	Quantity	Storage Conditions
N/A			

If hazardous or otherwise controlled waste storage areas are present on the site, please identify the type, location, quantity, and storage conditions of the waste materials.

Material Stored	Location	Quantity	Storage Conditions
N/A			

#### PHASE I INTERVIEW QUESTIONNAIRE

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16. If hazardous substances and/or petroleum products are present, are there indications of any of the following:

An existing release?	🗖 Yes 🗵 No
A past release?	🗖 Yes 🗵 No
A threat of their release?	🗖 Yes 🖾 No

If yes to any of the above, please describe:

17. Are there any aboveground or underground storage tanks? Identify tank volume, location, material, age.

AST/UST and Age	Location	Tank Volume	Material stored
None, site was residential			

18. Are there any historical or current drums and/or other containers? Identify volume, material, and location.

Volume	Material	Location
None, site was residential		

- Have there been any historical or any current noxious odors noted on the Site? Source? Describe.
   None, site was residential
- 20. To your knowledge, are there any utility corridors on the Site? Describe.

Not to Metro's knowledge

21. Any electrical or hydraulic equipment likely to contain PCB's such as transformers, hydraulic lifts, or

#### PHASE I INTERVIEW QUESTIONNAIRE Page 5 of 7

elevators (fluorescent light ballast excluded).

Not to Metro's knowledge

22. Are there any occupants on the Site? Describe and list duration of occupancy.

Metro is the sole occupant of the site and has been the sole occupant since approximately 2003.

23. Are there structures present on the site? Provide a general description of the structures on the site (amount, size, and age)?

Structure	Sq. Footage	Age
No structures currently, there is a chain link fence fronting the street, and a cement block wall fronting an adjoining property		

- 24. If any structures identify the type of HVAC system and fuel source on the interior. Any boilers present? None
- 25. Is the facility equipped with any backup generators? Fuel source?

None

26. Any historical or current stains or corrosion on floors, walls or ceilings?

None

27. Do you have good knowledge regarding the identity of any existing documents relating to the Site?

🛛 Yes		
🗖 No	If not, who does?	Phone Number:

28. To your knowledge, do any of the following documents exist with respect to the Site? If yes, please name the document and comment upon whether it is available for review.

Document	Availability/ Source	Title of Document
Environmental site assessment reports?	N/A	
Environmental audit reports?	N/A	
Environmental permits?	N/A	
Storage Tank registrations?	N/A	
Underground Injection System registrations?	N/A	
Material safety data sheets (MSDS)?	N/A	
Community right-to-know plans?	N/A	
Safety plans?	N/A	
Spill Prevention, Countermeasure, & Control Plans?	N/A	
Illness and Injury Prevention Plans?	N/A	
Reports regarding hydrogeologic conditions on the site or surrounding area?	N/A	
Hazardous waste generator notices or reports?	N/A	
Geotechnical studies?	N/A	
Risk assessments?	N/A	
Recorded Activity and Use Limitations (AULs)?	N/A	

### PHASE I INTERVIEW QUESTIONNAIRE

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To your knowledge, do any of the following exist with respect to the Site?

29. Notices or other correspondence from any government agency relating to past or current violations of environmental laws? □ Yes ⊠ No

If yes, describe:

30. Notices or other correspondence from any government agency relating to environmental liens encumbering the Site? □ Yes ⊠ No

If yes, describe:\_\_\_\_\_

31. Pending, threatened, or past litigation or administrative proceedings relevant to hazardous substances, or petroleum products in, on, or from the Site? □ Yes ⊠ No

If yes, describe:

#### PHASE I INTERVIEW QUESTIONNAIRE Page 7 of 7

32. Notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products? 🗖 Yes 🗵 No

If yes, describe:

Please provide any additional information relative to this project. 33.

Appendix G

Soil Vapor Survey



Project No. A9622-77-03 September 19, 2019

#### VIA E-MAIL

Rose Cuyno Bridge Housing 1301 Dove Street, Suite 920 Newport Beach, California 92660

Subject: SOIL VAPOR SURVEY REPORT LOS LIRIOS APARTMENTS 119 AND 121 SOUTH SOTO STREET LOS ANGELES, CALIFORNIA

Dear Mrs. Cuyno:

In accordance with your request, we performed a soil vapor survey (SVS) at the property located at 119 and 121 South Soto Street (the Site), in Los Angeles, California (Figure 1). Bridge Housing (the Client) requested the SVS to assess environmental concerns at the Site, identified in a Phase I Environmental Site Assessment (ESA), prior to redeveloping the Site as a multi-family residential property.

#### INTRODUCTION

#### **Site Location and Description**

The Site is comprised of two parcels with addresses of 119 and 121 South Soto Street within an area of mixed-use development that includes commercial and residential properties. The Site is owned by the Los Angeles County Metropolitan Transportation Authority (Metro).

The Site is currently undeveloped and relatively flat with a ground surface elevation of approximately 300 feet above mean sea level. The Site is a gated vacant (dirt) lot currently used for parking and material storage for an adjacent construction project.

#### Background

The Client and East LA Community Corporation (ELACC) are planning a joint development of the Site into a residential apartment complex with up to two levels of sub-grade parking. Geocon conducted an ESA of the Site in May 2018 for ELACC.

Records discovered during the ESA indicate that underground storage tanks (USTs) were present on one or more portions of the adjacent property to the north, now occupied by the Metro Soto Station. There are also records indicating that contaminated soil was removed during the construction of the Soto Station. It is unknown if the soil removal was associated with the removal of the USTs or if contaminated soil remains beneath portions of the Soto Station outside of the areas excavated during construction. Based on the extensive excavation that was performed during construction of the subway it is possible that potential soil contamination from the historic uses of the property would have been removed; however, without records documenting the extent of the removal, the threat of a vapor encroachment risk to the Site cannot be ruled out. We recommended that a soil vapor survey be conducted to evaluate the potential presence of volatile organic compounds (VOC) in soil vapor beneath the Site.

### Purpose

The purpose of the soil vapor survey was to assess if VOC-impacted soil vapor is present beneath the Site at concentrations that might pose an unacceptable risk to human health of future site residents, workers, and visitors via vapor intrusion of VOC-impacted soil vapor migrating into indoor air. The objective of the soil vapor sampling was to collect representative soil vapor samples within the footprint of the multi-unit residential structures planned for the Site in accordance with California Environmental Protection Agency (Cal-EPA), Department of Toxic Substances Control (DTSC) protocol, have them analyzed for VOCs, and compare the results to regulatory screening levels for soil vapor in a residential land use scenario.

#### SCOPE OF SERVICES

This section describes the activities performed for the SVS including pre-field and field activities and laboratory analysis of soil vapor samples.

#### **Pre-field Activities**

Pre-field activities included the following:

- Marked the proposed sampling areas with white paint (where necessary) and contacted local public utilities to delineate subsurface utilities and conduits via Dig Alert (Ticket Number A192140704-00A).
- Met with a representative of Metro to locate their utilities in the vicinity of each boring.
- Prepared a workplan dated July 19, 2019, that outlined the proposed scope of the SVS. Metro reviewed and accepted the workplan via an e-mail/letter/etc. dated July 25, 2019.
- Retained the services of H&P Mobile Geochemistry Inc. (H&P) to install the temporary soil vapor monitoring points and perform the chemical analysis of soil vapor samples.

### Field Activities – Soil Vapor

On August 7, 2019, H&P advanced borings SV-1 through SV-5 in the approximate locations outlined in the workplan as shown on Figure 2. H&P collected soil vapor samples following the procedures described below and guidelines in the DTSC's June 2015 *Advisory - Active Soil Gas Investigations*.

- H&P advanced each soil boring to a depth of 20 feet using a direct-push drilling rig.
- H&P constructed each soil vapor sampling point using 1/8-inch-diameter Nylaflow® tubing fitted with a 3-inch-long, stainless steel vapor probe tip. In each of the sampling points, the vapor probe tip was placed in the center of a 12-inch filter pack consisting of #30 silica sand. Six inches of dry granular bentonite clay was placed above the filter pack, and hydrated bentonite was placed from above that to the ground surface. Nylaflow® tubing extended approximately 2 feet above the ground surface and was capped with a polycarbonate 3-way stop valve to accommodate sample collection. H&P then closed the stop valve and waited at least 2 hours for subsurface conditions to equilibrate prior to sampling.
- H&P then purged the probe and tubing of approximately three volumes of vapor.
- H&P obtained vapor samples from each sample probe using gas-tight syringes attached to the sampling probe via a luer-lock connection, Samples were immediately delivered to an onsite mobile laboratory after collection. New tubing and syringes were used at each sampling point to prevent cross contamination.
- To check for leaks, H&P encompassed the soil vapor well, tubing, and sample point with a hard-plastic shroud containing a tracer compound of 1,1-difluoroethane (1,1-DFA). The tracer compound was sprayed inside the plastic shroud immediately prior to purging and sampling the well. If the tracer compound was detected in the sample by the mobile lab, another sample would be collected and analyzed.
- H&P analyzed the five soil vapor samples and a duplicate soil vapor sample collected from SV-5 for VOCs using modified United States Environmental Protection Agency (USEPA) Test Method 8260B.
- After sampling, H&P removed the soil vapor probes and tubing, and backfilled the borings with bentonite.

### RESULTS

### Soil Vapor Results

Soil vapor results are summarized below. A copy of the H&P laboratory analytical report is attached. Results equal to or greater than the method detection limit (MDL) but less than the laboratory reporting limit (RL) are considered to be estimated values and flagged with a "J" modifier.

- Benzene was detected in the five soil vapor samples and the duplicate sample at concentrations ranging from 20 J to 70  $\mu$ g/m<sup>3</sup>.
- Toluene was detected in the soil vapor sample collected from SV-4 at a concentration of 90 J  $\mu$ g/m<sup>3</sup> and in the duplicate sample collected from SV-5 at a concentration of 80 J  $\mu$ g/m<sup>3</sup>.

- Tetrachloroethene (PCE) was detected in the soil vapor samples collected from SV-4 and SV-5 at concentrations of 20 J  $\mu$ g/m<sup>3</sup> and 80  $\mu$ g/m<sup>3</sup>, respectively. PCE was also reported in the duplicate sample collected from SV-5 at a concentration of 90  $\mu$ g/m<sup>3</sup>.
- M,p-xylene was detected in the soil vapor sample collected from SV-4 at a concentration of 40  $J \mu g/m^3$ .
- Chloroform was detected in one sample (collected from SV-1) at an estimated concentration of 10 micrograms per cubic meter (µg/m<sup>3</sup>).
- No other VOCs were detected at concentrations equal to or exceeding their respective MDLs.

### Quality Assurance/Quality Control (QA/QC)

We reviewed H&Ps QA/QC provided with the laboratory reports. QA/QC procedures included the analysis of a blank sample. Benzene was reported in the blank sample at an estimate (J-flagged) concentration of 20  $\mu$ g/m<sup>3</sup>. The reported presence of benzene in the blank sample is equal to the concentration of benzene reported in the soil vapor samples collected from vapor points SV-1, SV-2, and SV-3. Therefore, the benzene concentrations in soil vapor samples SV-1, SV-2, and SV-3 are qualified as non-detect. The concentrations of benzene reported in soil vapor samples collected from vapor points SV-4, SV-5, and the duplicate from SV-5 are greater than two-times the concentration reported in the blank and therefore the results are considered valid. Additionally, the tracer compound 1,1-DFA was not detected at concentrations equal to or exceeding the reporting limits, which indicates that the sample collection equipment was free of atmospheric leaks.

#### SCREENING LEVEL COMPARISON

To assess the potential health risk associated with VOCs in soil vapor, indoor air, and sub-slab vapor, we compared the reported VOC concentrations to the DTSC-HERO Note 3: DTSC-modified Screening Levels (DTSC-SLs) and the USEPA Region 9 Regional Screening Levels (RSLs). The DTSC-SLs are available online at <a href="https://dtsc.ca.gov/wp-content/uploads/sites/31/2019/04/HHRA-Note-3-2019-04.pdf">https://dtsc.ca.gov/wp-content/uploads/sites/31/2019/04/HHRA-Note-3-2019-04.pdf</a> and the RSLs at <a href="https://dtsc.ca.gov/wp-content/uploads/sites/31/2019/04/HHRA-Note-3-2019-04.pdf">https://dtsc.ca.gov/wp-content/uploads/sites/31/2019/04/HHRA-Note-3-2019-04.pdf</a> and the RSLs at <a href="https://dtsc.ca.gov/wp-content/uploads/sites/31/2019/04/HHRA-Note-3-2019-04.pdf">https://dtsc.ca.gov/wp-content/uploads/sites/31/2019/04/HHRA-Note-3-2019-04.pdf</a> and the RSLs at <a href="https://dtsc.ca.gov/wp-content/uploads/sites/31/2019/04/HHRA-Note-3-2019-04.pdf">https://dtsc.ca.gov/wp-content/uploads/sites/31/2019/04/HHRA-Note-3-2019-04.pdf</a> and the RSLs at <a href="https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables">https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables</a>. DTSC-SLs are more stringent than the RSLs for some chemicals, using California-specific toxicity values and exposure factors. Both sets of screening levels were developed as conservative screening tools and neither are enforceable regulatory cleanup standards. When both DTSC-SLs and RSLs exist for a given chemical of concern, we compared VOC concentrations to the DTSC-SLs. Also, because the residential use of the Site is planned, we used the DTSC-SLs and RSLs for residential land use scenarios.

DTSC-SLs and RSLs have been developed for VOCs in ambient indoor air, but not in soil vapor; therefore, we converted indoor air screening levels to soil vapor screening levels using a default attenuation factor. As stated in DTSC's *Vapor Intrusion Guidance*, dated October 2011 (DTSC, 2011), attenuation factors represent the ratio between VOC concentrations in indoor air and soil vapor based on the following equation:

$$= C_{Indoor} / C_{Soil Vapor}$$

where: = Default attenuation rates

 $C_{\text{Indoor}} = \text{VOC}$  concentrations in indoor air ( $\mu g/m^3$ ), and

 $C_{\text{Soil Vapor}} = \text{VOC concentrations in soil vapor } (\mu g/m^3)$ 

By reworking to the following equation, screening levels for VOCs in soil vapor can be calculated using:

$$C_{\text{Soil Vapor}} = C_{\text{Indoor}} / ()$$

In their Human Health Risk Assessment Note 3 (updated April 2019), the DTSC-HERO recommends the use of the USEPA's default attenuation factor of 0.03. Therefore, to calculate DTSC-SLs and RSLs for VOCs in soil vapor, we divided the DTSC-SLs and RSLs for indoor air by 0.03.

VOCs detected in soil vapor at concentrations that are less than their respective DTSC-SLs and/or RSLs calculated for soil vapor are generally assumed not to pose a significant threat to human health or the environment, whereas VOCs detected in soil vapor at concentrations that equal or exceed their respective DTSC-SLs indicate that additional characterization investigation and/or mitigation actions may be warranted.

### **Preliminary Screening Assessment**

As summarized above, the VOCs in soil vapor detected at concentrations equal to or exceeding their MDLs were benzene, toluene, PCE, m,p-xylene, and chloroform. Our comparison of the maximum concentrations of these VOCs to their calculated residential use DTSC-SLs are as follows:

VOC	Maximum Concentration (µg/m³)	Calculated SLs* (µg/m³)
Benzene	70	3.2 (DTSC-SL)
Toluene	90	103,000 (DTSC-SL)
PCE	90	15.3 (DTSC-SL)
m,p-xylenes	40	3,300 (RSL)
Chloroform	10	4.0 (RSL)

Note: \*Calculated using a default attenuation factor of 0.03 for future residential buildings **Bold** = Exceeds residential SLs

#### CONCLUSIONS AND RECOMMENDATIONS

The results of this soil vapor survey indicate that benzene, PCE, and chloroform are present in soil vapor samples collected from SV-4 and SV-5 at concentrations which exceed their respective screening levels for soil vapor in a residential land use scenario. Based on this comparison, benzene, PCE, and chloroform in soil vapor are present in soil vapor beneath the Site at concentrations that may pose an unacceptable risk to human health of future site residents, workers, and visitors via vapor intrusion into indoor air. We recommend that the Client incorporate a soil vapor mitigation technology into the design of the proposed residential development to mitigate the potential risk of soil vapor intrusion into the future structure. The DTSC's *Vapor Intrusion Mitigation Advisory*, dated October 2011, and the attached *Fact Sheet: Development on Properties with a Vapor Intrusion Threat – July 2019* include additional information on evluating, installing, and monitoring soil vapor mitigation technologies.

#### LIMITATIONS

This report has been prepared exclusively for the Client. The conclusions presented in this report are based upon reasonable visual observations made at the site and subsurface information from widely spaced sampling points. The information presented is relevant to the dates of the study and should not be relied upon to represent conditions at later dates. If additional information becomes available, we request the opportunity to review the information and modify our opinions, if necessary. The information contained herein is only valid as of the date of the report and may require an update to reflect additional information obtained.

The Client should recognize that this report is not a comprehensive site characterization and should not be construed as such. The findings and conclusions as presented in this report are predicated on the results of the limited soil vapor sampling and laboratory analyses performed, based on the scope of services requested by the Client. It is possible that conditions may exist in the subsurface between the areas explored that could significantly change the conclusions and recommendations stated in this report. In addition, the information obtained is not intended to address potential impacts related to sources other than those requested by the Client as specified herein.

Therefore, the report should only be deemed conclusive with respect to the information obtained. No guarantee or warranty of the results of the report is implied within the intent of this report or any subsequent reports, correspondence, or consultation, either express or implied. Geocon strived to perform the services summarized herein in accordance with the local standard of care in the geographic region at the time the services were rendered.

These activities conducted at the subject site were conducted by Geocon expressly and solely for the Client. Any reliance upon the information, conclusions, or recommendations contained in this report for purposes other than the development of the subject property as currently proposed shall be at the sole liability of the party undertaking such use.

We appreciate the opportunity to assist you in this matter. Please contact us if you have any questions concerning this report or if we may be of further service.

Sincerely,



(EMAIL) Addressee

Attachments: Figure 1, Vicinity Map Figure 2, Site Plan H&P Analytical Laboratory Results Fact Sheet: Development on Properties with a Vapor Intrusion Threat – July 2019







11 September 2019

Mike Conkle Geocon Consultants, Inc. - Burbank 3303 N. San Fernando Blvd. Burbank, CA 91504

H&P Project: GC080719-L6 Rev Client Project: A9622-77-03 / S Soto St

Dear Mike Conkle:

Enclosed is the analytical report for the above referenced project. The data herein applies to samples as received by H&P Mobile Geochemistry, Inc. on 07-Aug-19 which were analyzed in accordance with the attached Chain of Custody record(s).

The results for all sample analyses and required QA/QC analyses are presented in the following sections and summarized in the documents:

- Sample Summary
- Case Narrative (if applicable)
- Sample Results
- Quality Control Summary
- Notes and Definitions / Appendix
- Chain of Custody
- Sampling Logs (if applicable)

Unless otherwise noted, I certify that all analyses were performed and reviewed in compliance with our Quality Systems Manual and Standard Operating Procedures. This report shall not be reproduced, except in full, without the written approval of H&P Mobile Geochemistry, Inc.

We at H&P Mobile Geochemistry, Inc. sincerely appreciate the opportunity to provide analytical services to you on this project. If you have any questions or concerns regarding this analytical report, please contact me at your convenience at 760-804-9678.

Sincerely,

Ganis Faroux

Janis La Roux Laboratory Director

H&P Mobile Geochemistry, Inc. is certified under the California ELAP and the National Environmental Laboratory Accreditation Conference (NELAC). H&P is approved as an Environmental Testing Laboratory and Mobile Laboratory in accordance with the DoD-ELAP Program and ISO/IEC 17025:2005 programs, accreditation number 69070 for EPA Method TO-15, H&P Method TO-15, EPA Method 8260B and H&P 8260SV.

Quality. Accuracy. Experience.

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Geocon Consultants, Inc Burbank 3303 N. San Fernando Blvd. Burbank, CA 91504	Project: GC Project Number: A9 Project Manager: Mi	C080719-L6 Rev 0622-77-03 / S Soto S ke Conkle	St Re 11	Reported: 11-Sep-19 12:32		
	ANALYTICAL REPORT FO	OR SAMPLES				
Sample ID	Laborate	ory ID Matrix	Date Sampled	Date Received		
SV-1-20	E908033	3-01 Vapor	07-Aug-19	07-Aug-19		
SV-2-20	E908033	3-02 Vapor	07-Aug-19	07-Aug-19		
SV-3-20	E908033	3-03 Vapor	07-Aug-19	07-Aug-19		
SV-4-20	E908033	3-04 Vapor	07-Aug-19	07-Aug-19		
SV-5-20	E908033	3-05 Vapor	07-Aug-19	07-Aug-19		
SV-5-20 Rep	E908033	8-06 Vapor	07-Aug-19	07-Aug-19		

Geocon Consultants, Inc Burbank 3303 N. San Fernando Blvd. Burbank, CA 91504		Pro Proj	Projec ject Number ect Manager	t: GC0807 r: A9622-7 r: Mike Co	719-L6 Rev 77-03 / S So onkle	to St		Rep 11-	oorted: Sep-19 12:32	
	Vo	olatile Orga	nic Com	pounds	by H&I	P 8260SV	τ			
		H&P I	Mobile G	eochem	nistry, In	c.				
Analyte	Result	MDL	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SV-1-20 (E908033-01) Vapor Sampled:	07-Aug-19 H	Received: 07-Au	ıg-19							J- Report
1,1-Difluoroethane (LCC)	ND		100	ug/m3	0.01	EH90702	07-Aug-19	07-Aug-19	H&P 8260SV	
Dichlorodifluoromethane (F12)	ND	40	100	"	"	"	"	"	"	
Chloromethane	ND	40	100	"	"	"	"	"	"	
Vinyl chloride	ND	10	10	"	"	"	"	"	"	
Bromomethane	ND	40	100	"	"	"	"	"	"	
Chloroethane	ND	40	100	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	40	100		"	"	"	"	"	
1,1-Dichloroethene	ND	40	100	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	40	100	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	40	100	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	40	100	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	40	100	"	"	"	"	"	"	
1,1-Dichloroethane	ND	40	100	"	"	"	"	"	"	
2,2-Dichloropropane	ND	40	100	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	40	100	"	"	"	"	"	"	
Chloroform	10	10	20	"	"	"	"	"	"	J
Bromochloromethane	ND	40	100		"	"	"	"	"	
1,1,1-Trichloroethane	ND	40	100		"	"	"	"	"	
1,1-Dichloropropene	ND	40	100	"	"	"	"	"	"	
Carbon tetrachloride	ND	10	20	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	10	20	"	"	"	"	"	"	
Benzene	20	10	20		"	"	"	"	"	B-03
Trichloroethene	ND	10	20	"	"	"	"	"	"	
1,2-Dichloropropane	ND	40	100	"	"	"	"	"	"	
Bromodichloromethane	ND	40	100	"	"	"	"	"	"	
Dibromomethane	ND	40	100	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	40	100		"	"	"	"	"	
Toluene	ND	80	200		"	"	"	"	"	
trans-1,3-Dichloropropene	ND	40	100		"	"	"	"	"	
1,1,2-Trichloroethane	ND	40	100		"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	40	100		"	"	"	"	"	
1,3-Dichloropropane	ND	40	100		"	"	"	"	"	
Tetrachloroethene	ND	20	20		"	"	"	"	"	
Dibromochloromethane	ND	40	100	"	"	"	"	"	"	
Chlorobenzene	ND	10	20	"	"	"	"	"	"	
Ethylbenzene	ND	40	100	"	"	"	"	"	"	

Geocon Consultants, Inc Burt		Project	GC080719	9-L6 Rev						
3303 N. San Fernando Blvd.	Pr	oject Number	: A9622-77	-03 / S Sc	oto St		Rep			
Burbank, CA 91504		Project Manager: Mike Conkle								
	,	Volatile Org	anic Com	nounds h	v H&I	P 8260SV	7		-	
		H&P	Mobile G	eochemi	stry, In	c.				
			Reporting		Dilution					
Analyte	Result	MDL	Limit	Units	Factor	Batch	Prepared	Analyzed	Method	Notes
SV-1-20 (E908033-01) Vapor S	ampled: 07-Aug-19	Received: 07-A	ug-19							J- Report
1,1,1,2-Tetrachloroethane	ND	40	100	ug/m3	0.01	EH90702	07-Aug-19	07-Aug-19	H&P 8260SV	
m,p-Xylene	ND	40	100	"	"	"	"	"		
o-Xylene	ND	40	100	"	"	"	"	"	"	
Styrene	ND	40	100	"	"	"	"	"	"	
Bromoform	ND	40	100	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	40	100	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	40	100	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	40	100	"	"	"	"	"	"	
n-Propylbenzene	ND	40	100	"	"	"	"	"	"	
Bromobenzene	ND	40	100	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	40	100	"	"	"	"	"	"	
2-Chlorotoluene	ND	40	100	"	"	"	"	"	"	
4-Chlorotoluene	ND	40	100	"	"	"	"	"	"	
tert-Butylbenzene	ND	40	100	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	40	100	"	"	"	"	"	"	
sec-Butylbenzene	ND	40	100	"	"	"	"	"	"	
p-Isopropyltoluene	ND	40	100	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	40	100	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	40	100	"	"	"	"	"	"	
n-Butylbenzene	ND	40	100	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	40	100	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	400	1000	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	40	100	"	"	"	"	"	"	
Hexachlorobutadiene	ND	40	100	"	"	"	"	"	"	
Naphthalene	ND	20	20	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	40	100	"	"	"	"	"	"	
			102.04	75 10			,,			
Surrogate: Dibromofluoromethan	e 1		105 %	/5-12	э 5					
Surrogate: 1,2-Dicnioroethane-a-	ŧ		100 % 08 8 %	/ 3-12	5	"	"	"	"	
Surrogate: 4-Bromofluorohanzan	2		90.0 /0 97 1 %	75-12	5	"	"	"	"	
Sarroguie. 7-Dromojiuorovenzeni	~		14.1 /0	/ 5-12	<i>.</i>					

Geocon Consultants, Inc Burbank 3303 N. San Fernando Blvd. Burbank, CA 91504		Pro Pro	Project oject Number ject Manager	GC0807 A9622- Mike Co	719-L6 Rev 77-03 / S So onkle	to St		Rep 11-5	oorted: Sep-19 12:32	
	Vol	atile Orga	nic Com	pounds	by H&F	P 8260SV	7			
		H&P	Mobile G	eochen	nistry, In	с.				
Analyte	Result	MDL	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SV-2-20 (E908033-02) Vapor Sampled:	07-Aug-19 Re	ceived: 07-A	ug-19							J- Report
1,1-Difluoroethane (LCC)	ND		100	ug/m3	0.01	EH90702	07-Aug-19	07-Aug-19	H&P 8260SV	
Dichlorodifluoromethane (F12)	ND	40	100	"	"	"	"	"	"	
Chloromethane	ND	40	100	"	"	"	"	"	"	
Vinyl chloride	ND	10	10	"	"	"	"	"	"	
Bromomethane	ND	40	100	"	"	"	"	"	"	
Chloroethane	ND	40	100	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	40	100	"	"	"	"	"	"	
1,1-Dichloroethene	ND	40	100	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	40	100	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	40	100	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	40	100	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	40	100	"	"	"	"	"	"	
1,1-Dichloroethane	ND	40	100	"	"	"	"	"	"	
2,2-Dichloropropane	ND	40	100	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	40	100	"	"	"	"	"	"	
Chloroform	ND	10	20	"	"	"	"	"	"	
Bromochloromethane	ND	40	100	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	40	100	"	"	"	"	"	"	
1,1-Dichloropropene	ND	40	100	"	"	"	"	"	"	
Carbon tetrachloride	ND	10	20	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	10	20	"	"	"	"	"	"	
Benzene	20	10	20	"	"	"	"	"	"	B-03
Trichloroethene	ND	10	20	"	"	"	"	"	"	
1,2-Dichloropropane	ND	40	100	"	"	"	"	"	"	
Bromodichloromethane	ND	40	100	"	"	"	"	"	"	
Dibromomethane	ND	40	100	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	40	100		"	"	"	"	"	
Toluene	ND	80	200		"	"	"	"	"	
trans-1,3-Dichloropropene	ND	40	100	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	40	100	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	40	100		"	"	"	"	"	
1,3-Dichloropropane	ND	40	100		"	"		"	"	
Tetrachloroethene	ND	20	20		"	"		"	"	
Dibromochloromethane	ND	40	100		"	"		"	"	
Chlorobenzene	ND	10	20		"	"	"	"	"	
		. •								

Geocon Consultants, Inc Burb	ank		Project	GC080719	9-L6 Rev					
3303 N. San Fernando Blvd.	Pi	oject Number	: A9622-77	-03 / S So	to St		Rep			
Burbank, CA 91504		Project Manager: Mike Conkle								
		Volatile Org	anic Com	nounds b	v H&I	P 8260SV	7		-	
		H&P	Mobile G	eochemis	stry, In	c.				
			Reporting		Dilution					
Analyte	Result	MDL	Limit	Units	Factor	Batch	Prepared	Analyzed	Method	Notes
SV-2-20 (E908033-02) Vapor S	ampled: 07-Aug-19	Received: 07-A	ug-19							J- Report
1,1,1,2-Tetrachloroethane	ND	40	100	ug/m3	0.01	EH90702	07-Aug-19	07-Aug-19	H&P 8260SV	
m,p-Xylene	ND	40	100	"	"	"	"	"	"	
o-Xylene	ND	40	100	"	"	"	"	"	"	
Styrene	ND	40	100	"	"	"	"	"	"	
Bromoform	ND	40	100	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	40	100	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	40	100	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	40	100	"	"	"	"	"	"	
n-Propylbenzene	ND	40	100	"	"	"	"	"	"	
Bromobenzene	ND	40	100	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	40	100	"	"	"	"	"	"	
2-Chlorotoluene	ND	40	100	"	"	"	"	"	"	
4-Chlorotoluene	ND	40	100	"	"	"	"	"	"	
tert-Butylbenzene	ND	40	100	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	40	100	"	"	"	"	"	"	
sec-Butylbenzene	ND	40	100	"	"	"	"	"	"	
p-Isopropyltoluene	ND	40	100	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	40	100	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	40	100	"	"	"	"	"	"	
n-Butylbenzene	ND	40	100	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	40	100	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	400	1000	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	40	100	"	"	"	"	"	"	
Hexachlorobutadiene	ND	40	100	"	"	"	"	"	"	
Naphthalene	ND	20	20	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	40	100	"	"	"	"	"	"	
Compared Dilana di si			1010/	75 10	5		,,		,,	_
Surrogate: Dibromofluoromethan	e 1		101 %	/3-12	э 5					
Surrogate: 1,2-Dicnioroethane-d4 Surrogate: Toluana d8			100 % 07 0 %	/3-12	5	"	"	"	"	
Surrogate: 4-Bromofluorobergan			97.070	75-12	5	"	"	"	"	
σαιτσχαιε. <del>τ</del> -στοπισμιστουenzene			14.0 /0	/ 5-12	J					
Geocon Consultants, Inc Burbank 3303 N. San Fernando Blvd. Burbank, CA 91504		Pro Pro	Project oject Number ject Manager	:: GC0807 :: A9622- :: Mike Co	719-L6 Rev 77-03 / S So onkle	to St		Rep 11-	oorted: Sep-19 12:32	
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	Vol	atile Orga	nic Com	pounds	by H&I	P 8260SV	7			
		H&P	Mobile G	eochen	nistry, In	c.				
Analyte	Result	MDL	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SV-3-20 (E908033-03) Vapor Sampled:	07-Aug-19 Re	ceived: 07-A	ug-19							J- Report
1,1-Difluoroethane (LCC)	ND		100	ug/m3	0.01	EH90702	07-Aug-19	07-Aug-19	H&P 8260SV	
Dichlorodifluoromethane (F12)	ND	40	100	"	"	"	"	"	"	
Chloromethane	ND	40	100	"	"	"	"	"	"	
Vinyl chloride	ND	10	10		"	"	"	"	"	
Bromomethane	ND	40	100	"	"	"	"	"	"	
Chloroethane	ND	40	100	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	40	100	"	"	"	"	"	"	
1,1-Dichloroethene	ND	40	100		"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	40	100	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	40	100		"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	40	100		"	"	"	"	"	
trans-1,2-Dichloroethene	ND	40	100		"	"	"	"	"	
1,1-Dichloroethane	ND	40	100		"	"	"	"	"	
2,2-Dichloropropane	ND	40	100		"	"	"	"	"	
cis-1,2-Dichloroethene	ND	40	100	"	"	"	"	"	"	
Chloroform	ND	10	20	"	"	"	"	"	"	
Bromochloromethane	ND	40	100	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	40	100	"	"	"	"	"	"	
1,1-Dichloropropene	ND	40	100	"	"	"	"	"	"	
Carbon tetrachloride	ND	10	20	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	10	20		"	"	"	"	"	
Benzene	20	10	20		"	"	"	"	"	B-03, J
Trichloroethene	ND	10	20		"	"	"	"	"	
1,2-Dichloropropane	ND	40	100		"	"	"	"	"	
Bromodichloromethane	ND	40	100		"	"	"	"	"	
Dibromomethane	ND	40	100	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	40	100	"	"	"	"	"	"	
Toluene	ND	80	200		"	"	"	"	"	
trans-1,3-Dichloropropene	ND	40	100	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	40	100	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	40	100	"	"		"	"	"	
1,3-Dichloropropane	ND	40	100	"	"	"	"	"	"	
Tetrachloroethene	ND	20	20	"	"	"	"	"	"	
Dibromochloromethane	ND	40	100	"	"	"	"	"	"	
Chlorobenzene	ND	10	20	"	"	"	"	"	"	
Ethylbenzene	ND	40	100		"	"	"	"	"	

Geocon Consultants, Inc Burb	ank		Project	GC080719	-L6 Rev					
3303 N. San Fernando Blvd.		Pr	oject Number	: A9622-77	-03 / S So	to St		Rep	orted:	
Burbank, CA 91504		Pro	oject Manager	: Mike Con	kle			11-	Sep-19 12:32	
	,	Volatile Org	anic Com	nounds h	v H&I	P 8260SV	7		-	
		H&P	Mobile G	eochemi	stry, In	c.				
			Reporting		Dilution					
Analyte	Result	MDL	Limit	Units	Factor	Batch	Prepared	Analyzed	Method	Notes
SV-3-20 (E908033-03) Vapor S	ampled: 07-Aug-19	Received: 07-A	ug-19							J- Report
1,1,1,2-Tetrachloroethane	ND	40	100	ug/m3	0.01	EH90702	07-Aug-19	07-Aug-19	H&P 8260SV	
m,p-Xylene	ND	40	100	"	"	"	"	"		
o-Xylene	ND	40	100	"	"	"	"	"	"	
Styrene	ND	40	100	"	"	"	"	"	"	
Bromoform	ND	40	100	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	40	100	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	40	100	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	40	100	"	"	"	"	"	"	
n-Propylbenzene	ND	40	100	"	"	"	"	"	"	
Bromobenzene	ND	40	100	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	40	100	"	"	"	"	"	"	
2-Chlorotoluene	ND	40	100	"	"	"	"	"	"	
4-Chlorotoluene	ND	40	100	"	"	"	"	"	"	
tert-Butylbenzene	ND	40	100	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	40	100	"	"	"	"	"	"	
sec-Butylbenzene	ND	40	100	"	"	"	"	"	"	
p-Isopropyltoluene	ND	40	100	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	40	100	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	40	100	"	"	"	"	"	"	
n-Butylbenzene	ND	40	100	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	40	100	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	400	1000	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	40	100	"	"	"	"	"	"	
Hexachlorobutadiene	ND	40	100	"	"	"	"	"	"	
Naphthalene	ND	20	20	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	40	100	"	"	"	"	"	"	
			107.04	75 10	-		,,		,,	
Surrogate: Dibromofluoromethan	e 1		10/%	/5-12	5 5					
Surrogate: 1,2-Dicnioroethane-d4 Surrogate: Toluene d8	•		115 % 07 5 %	/ 3-12	5	"	"	"	"	
Surrogate: 4-Bromofluorohonzon	0		97.J /0 87 1 %	75-12	5	"	"	"	"	
54115guie. <del>-</del> 5101110j110100ell2elle	·		07.7 /0	/ 5-12	0					

Geocon Consultants, Inc Burbank 3303 N. San Fernando Blvd. Burbank, CA 91504		Pro Pro	Project oject Number ject Manager	:: GC0807 :: A9622- :: Mike Co	719-L6 Rev 77-03 / S So onkle	to St		Rep 11-5	oorted: Sep-19 12:32	
	Vol	atile Orga	nic Com	pounds	by H&F	P 8260SV	7			
		H&P	Mobile G	leochen	nistry, In	c.				
Analyte	Result	MDL	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SV-4-20 (E908033-04) Vapor Sampled:	07-Aug-19 Re	ceived: 07-A	ug-19							J- Report
1,1-Difluoroethane (LCC)	ND		100	ug/m3	0.01	EH90702	07-Aug-19	07-Aug-19	H&P 8260SV	
Dichlorodifluoromethane (F12)	ND	40	100	"	"	"	"	"	"	
Chloromethane	ND	40	100	"	"	"	"	"	"	
Vinyl chloride	ND	10	10	"	"	"	"	"	"	
Bromomethane	ND	40	100		"	"	"	"		
Chloroethane	ND	40	100		"	"	"	"		
Trichlorofluoromethane (F11)	ND	40	100		"	"	"	"	"	
1,1-Dichloroethene	ND	40	100		"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	40	100	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	40	100	"	"	"	"	"		
Methyl tertiary-butyl ether (MTBE)	ND	40	100	"	"	"	"	"		
trans-1,2-Dichloroethene	ND	40	100	"	"	"	"	"		
1,1-Dichloroethane	ND	40	100		"	"	"	"		
2,2-Dichloropropane	ND	40	100	"	"	"	"	"		
cis-1,2-Dichloroethene	ND	40	100	"	"	"	"	"		
Chloroform	ND	10	20	"	"	"	"	"		
Bromochloromethane	ND	40	100		"	"	"	"		
1,1,1-Trichloroethane	ND	40	100	"	"	"	"	"	"	
1,1-Dichloropropene	ND	40	100		"	"	"	"		
Carbon tetrachloride	ND	10	20		"	"	"	"		
1,2-Dichloroethane (EDC)	ND	10	20		"	"	"	"	"	
Benzene	50	10	20		"	"	"	"	"	B-03
Trichloroethene	ND	10	20		"	"	"	"	"	
1,2-Dichloropropane	ND	40	100		"	"	"	"	"	
Bromodichloromethane	ND	40	100		"	"	"	"	"	
Dibromomethane	ND	40	100		"	"	"	"	"	
cis-1,3-Dichloropropene	ND	40	100		"	"	"	"	"	
Toluene	90	80	200		"	"	"	"		J
trans-1,3-Dichloropropene	ND	40	100		"	"	"	"		
1.1.2-Trichloroethane	ND	40	100		"	"	"	"		
1.2-Dibromoethane (EDB)	ND	40	100		"	"	"	"		
1.3-Dichloropropane	ND	40	100		"		"	"	"	
Tetrachloroethene	20		20		"		"	"	"	I
Dibromochloromethane		20 40	100		"	"		"	"	5
Chlorobenzene		 10	20		"			"	"	
Children		10	20							

Geocon Consultants, Inc Bu	urbank		Projec	t: GC08071	9-L6 Rev					
3303 N. San Fernando Blvd.		P	roject Number	r: A9622-77	7-03 / S So	to St		Rep	orted:	
Burbank, CA 91504		Pr	oject Manage	r: Mike Cor	nkle			11-5	Sep-19 12:32	
		Volatile Org	anic Com	nounds b	w H&F	2260SV	7		-	
		H&P	<sup>o</sup> Mobile C	eochemi	stry, In	c.				
			Reporting		Dilution					
Analyte	Result	MDL	Limit	Units	Factor	Batch	Prepared	Analyzed	Method	Notes
SV-4-20 (E908033-04) Vapor	Sampled: 07-Aug-19	Received: 07-A	Aug-19							J- Report
1,1,1,2-Tetrachloroethane	ND	40	100	ug/m3	0.01	EH90702	07-Aug-19	07-Aug-19	H&P 8260SV	
m,p-Xylene	40	40	100	"	"	"	"	"	"	J
o-Xylene	ND	40	100	"	"	"	"	"	"	
Styrene	ND	40	100	"	"	"	"	"	"	
Bromoform	ND	40	100	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	40	100	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	40	100	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	40	100	"	"	"	"	"	"	
n-Propylbenzene	ND	40	100	"	"	"	"	"	"	
Bromobenzene	ND	40	100	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	40	100	"	"	"	"	"	"	
2-Chlorotoluene	ND	40	100	"	"	"	"	"	"	
4-Chlorotoluene	ND	40	100	"	"	"	"	"	"	
tert-Butylbenzene	ND	40	100	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	40	100	"	"	"	"	"	"	
sec-Butylbenzene	ND	40	100	"	"	"	"	"	"	
p-Isopropyltoluene	ND	40	100	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	40	100	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	40	100	"	"	"	"	"	"	
n-Butylbenzene	ND	40	100	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	40	100	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	400	1000	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	40	100	"	"	"	"	"	"	
Hexachlorobutadiene	ND	40	100	"	"	"	"	"	"	
Naphthalene	ND	20	20	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	40	100	"		"	"	"	"	
Commenter Dila di si			00.40/	75 1						
Surrogate: Dibromojiuorometh	ane		99.4 % 112.0/	/3-12	23 25	,,		"	,,	
Surrogate: 1,2-Dichioroethane Surrogate: Toluone d&	-44		112 % 00 2 %	75 1	25	"	"	"	"	
Surrogate: 1-Bromofluorobanz	ono		89.2 /0	75-12	25	"	"	"	"	
Surroguie. +-Dromojiuorobenze	ene		07.2 /0	/ 5-14						

Geocon Consultants, Inc Burbank 3303 N. San Fernando Blvd. Burbank, CA 91504		Pro Pro	Project oject Number ject Manager	t: GC0807 r: A9622- r: Mike C	719-L6 Rev 77-03 / S So onkle	to St		Rep 11-5	orted: Sep-19 12:32	
	Vol	atile Orga	nic Com	pounds	by H&F	98260SV	7			
		H&P	Mobile G	leochen	nistry, In	c.				
Analyte	Result	MDL	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SV-5-20 (E908033-05) Vapor Sampled:	07-Aug-19 Re	ceived: 07-A	ug-19							J- Report
1,1-Difluoroethane (LCC)	ND		100	ug/m3	0.01	EH90702	07-Aug-19	07-Aug-19	H&P 8260SV	
Dichlorodifluoromethane (F12)	ND	40	100	"	"	"	"	"	"	
Chloromethane	ND	40	100	"	"	"	"	"	"	
Vinyl chloride	ND	10	10	"	"	"	"	"	"	
Bromomethane	ND	40	100	"	"	"	"	"	"	
Chloroethane	ND	40	100	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	40	100	"	"	"	"	"	"	
1,1-Dichloroethene	ND	40	100	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	40	100	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	40	100	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	40	100	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	40	100	"	"	"	"	"	"	
1,1-Dichloroethane	ND	40	100	"	"	"	"	"	"	
2,2-Dichloropropane	ND	40	100	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	40	100	"	"	"	"	"	"	
Chloroform	ND	10	20	"	"	"	"	"	"	
Bromochloromethane	ND	40	100	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	40	100	"	"	"	"	"	"	
1,1-Dichloropropene	ND	40	100	"	"	"	"	"	"	
Carbon tetrachloride	ND	10	20	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	10	20	"	"	"	"	"	"	
Benzene	50	10	20	"	"		"	"	"	B-03
Trichloroethene	ND	10	20	"	"		"	"	"	
1,2-Dichloropropane	ND	40	100	"	"		"	"	"	
Bromodichloromethane	ND	40	100	"	"		"	"	"	
Dibromomethane	ND	40	100	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	40	100	"	"	"	"	"	"	
Toluene	ND	80	200	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	40	100	"	"		"	"	"	
1,1,2-Trichloroethane	ND	40	100	"	"		"	"	"	
1,2-Dibromoethane (EDB)	ND	40	100	"	"		"	"	"	
1,3-Dichloropropane	ND	40	100	"	"		"	"	"	
Tetrachloroethene	80	20	20	"	"			"	"	
Dibromochloromethane	ND	40	100	"	"		"	"	"	
Chlorobenzene	ND	10	20	"	"		"	"	"	
			_5							

Geocon Consultants, Inc Burbank			Project	: GC08071	9-L6 Rev					
3303 N. San Fernando Blvd.		Pro	ject Number	: A9622-77	-03 / S So	to St		Rer	orted:	
Burbank, CA 91504		Pro	ject Manager	: Mike Con	kle			11-5	Sep-19 12:32	
	1	Volatile Orga	nic Com	nounds h	v H&I	2826051	7		- <b>I</b>	
		H&P	Mobile G	eochemi	strv. In	. 02005 v				
			Dementione		D'1 (					
Analyte	Result	MDL	Limit	Units	Factor	Batch	Prepared	Analyzed	Method	Notes
SV-5-20 (E908033-05) Vapor Samp	led: 07-Aug-19	Received: 07-A	ıg-19							J- Report
1,1,1,2-Tetrachloroethane	ND	40	100	ug/m3	0.01	EH90702	07-Aug-19	07-Aug-19	H&P 8260SV	
m,p-Xylene	ND	40	100	"	"	"	"	"	"	
o-Xylene	ND	40	100	"	"	"	"	"	"	
Styrene	ND	40	100	"	"	"	"	"	"	
Bromoform	ND	40	100	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	40	100	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	40	100	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	40	100	"	"	"	"	"	"	
n-Propylbenzene	ND	40	100	"	"	"	"	"	"	
Bromobenzene	ND	40	100	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	40	100	"	"	"	"	"	"	
2-Chlorotoluene	ND	40	100	"	"	"	"	"	"	
4-Chlorotoluene	ND	40	100	"	"	"	"	"	"	
tert-Butylbenzene	ND	40	100	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	40	100	"	"	"	"	"	"	
sec-Butylbenzene	ND	40	100	"	"	"	"	"	"	
p-Isopropyltoluene	ND	40	100	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	40	100	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	40	100	"	"	"	"	"	"	
n-Butylbenzene	ND	40	100	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	40	100	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	400	1000	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	40	100	"	"	"	"	"	"	
Hexachlorobutadiene	ND	40	100	"	"	"	"	"	"	
Naphthalene	ND	20	20	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	40	100	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane			103 %	75-17	15	"	"	"	"	
Surrogate: 1.2-Dichloroethane-d4			112 %	75-12	5	"	"	"	"	
Surrogate: Toluene-d8			99.5 %	75-12		"	"	"	"	
Surrogate: 4-Bromofluorobenzene			88.3 %	75-12	5	"	"	"	"	

Geocon Consultants, Inc Burbank 3303 N. San Fernando Blvd. Burbank, CA 91504		Pro Pro	Projec oject Number ject Manager	:: GC0807 :: A9622-7 :: Mike Co	19-L6 Rev 77-03 / S So onkle	to St		Rep 11-	ported: Sep-19 12:32	
	Vola	tile Orga	nic Com	pounds	by H&F	P 8260SV	7			
		H&P	Mobile G	- leochem	istry, In	c.				
Analyte	Result	MDL	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SV-5-20 Rep (E908033-06) Vapor Samp	oled: 07-Aug-19	Received:	07-Aug-19							J- Report
1,1-Difluoroethane (LCC)	ND		100	ug/m3	0.01	EH90702	07-Aug-19	07-Aug-19	H&P 8260SV	
Dichlorodifluoromethane (F12)	ND	40	100	"	"	"	"	"	"	
Chloromethane	ND	40	100	"	"	"	"	"		
Vinyl chloride	ND	10	10	"	"	"	"	"	"	
Bromomethane	ND	40	100	"	"	"	"	"	"	
Chloroethane	ND	40	100	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	40	100	"	"	"	"	"	"	
1,1-Dichloroethene	ND	40	100	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	40	100	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	40	100	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	40	100	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	40	100	"	"	"	"	"	"	
1,1-Dichloroethane	ND	40	100	"	"	"	"	"	"	
2,2-Dichloropropane	ND	40	100	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	40	100	"	"	"	"	"	"	
Chloroform	ND	10	20	"	"	"	"	"	"	
Bromochloromethane	ND	40	100	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	40	100	"	"	"	"	"	"	
1,1-Dichloropropene	ND	40	100	"	"	"	"	"	"	
Carbon tetrachloride	ND	10	20	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	10	20	"	"	"	"	"	"	
Benzene	70	10	20	"	"	"	"	"	"	B-03
Trichloroethene	ND	10	20	"	"	"	"	"	"	
1,2-Dichloropropane	ND	40	100	"	"	"	"	"	"	
Bromodichloromethane	ND	40	100	"	"	"	"	"	"	
Dibromomethane	ND	40	100	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	40	100	"	"	"	"	"	"	
Toluene	80	80	200	"	"	"	"	"	"	J
trans-1,3-Dichloropropene	ND	40	100	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	40	100	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	40	100	"	"	"	"	"	"	
1,3-Dichloropropane	ND	40	100	"	"	"	"	"	"	
Tetrachloroethene	90	20	20	"	"	"	"	"	"	
Dibromochloromethane	ND	40	100	"	"	"	"	"	"	
Chlorobenzene	ND	10	20	"	"	"	"	"	"	
Ethylbenzene	ND	40	100	"	"	"	"	"	"	

330 N. San Pernando Blvd.     Project Number: 0902: 77-03 / S Soto St.     Reported: Project Number: 0902: 77-03 / S Soto St.     Reported: 11-Sep-19 12.32       Volatile Organic Compounds by H&P 8260S:       H&P Mobile Geochemistry, Inc.       Superitation of the second structure of the s	Geocon Consultants, Inc Burbar	ık		Project	: GC08071	9-L6 Rev					
Barbank, CA 91504         Project Manager:         Mike Conkle         Interpretain         Mike Conkle           Volatile Organic Compounds by H&P 82608V           H&P Mobile Ceochemistry, Inc.           Interpretain         Dulation           Analyze         Result         MD         Leopering         Dulation         Batch         Prepared         Analyzed         Method         Notes           St-520 Rep (E908033-60) Vapor         Sampled: 07-Aug-19         Received: 07-Aug-19         Received: 07-Aug-19         Betch         Prepared         Analyzed         Method         Notes           St-520 Rep (E908033-60) Vapor         Sampled: 07-Aug-19         Received: 07-Aug-19	3303 N. San Fernando Blvd.		Pr	oject Number	: A9622-77	-03 / S So	to St		Ren	orted:	
Volatile Organic Compounds by H&P 82608V           H&P Mobile Geochemistry, Inc.           Analyze         Result         MDI         Euror         Dilation         Prepared         Analyze         Method         Notes           SV-5-20 Rep (£908033-06) Vapor         Sampled: 07-Aug-19         Received: 07-Aug-19         Dilation         Batch         Prepared         Analyzed         Method         Notes           SV-5-20 Rep (£908033-06) Vapor         Sampled: 07-Aug-19         Received: 07-Aug-19         07-Aug-19         07-Aug-19         07-Aug-19         14.0 Prepared         Analyzed         J. Report           JL_12-Tetrachonethane         ND         40         100         -	Burbank, CA 91504		Pro	oject Manager	: Mike Con	kle			11-5	Sep-19 12:32	
H&P Mobile Geochemistry, Inc.           Analyte         Result         MDL         Reporting         Diation           Analyte         Result         MDL         Preprint         Units         Batch         Preprint         Analyzed         Method         Notes           SV5-20 Rep (£908033-06) Vapor         Sampled: 07-Aug-19         Received: 07-Aug-19         07-Aug-19         07-Aug-19         H&P & E0080X           ND         40         100         -         -         -         -         -           System         ND         40         100         -         -         -         -         -           System         ND         40         100         -         -         -         -         -           System         ND         40         100         -         -         -         -         -           Brondorm         ND         40         100         -         -         -         -         -         -           12.3-Trichloropropane         ND         40         100         -         -         -         -         -         -         -         -         -         -         -         -         -		Vala	tile Ong	onia Com	nounda h		096063	7		- F	
Analyte         Result         MDL         Reporting Limit         Dilation Pactor         During Batch         Prepared         Analyzed         Method         Notes           SV-520 Rep (£908033-06) Vapor         Sampled: 07-Aug-19         Construction         Dilation         Batch         Prepared         Analyzed         Method         Notes           SV-520 Rep (£908033-06) Vapor         Sampled: 07-Aug-19         Received: 07-Aug-19         07-Aug-19         RAppent         Dilation         -		V 014	H&P	Mobile G	eochemi	strv. In	02005 v c.				
Marke         Result         MDL         Limit         Units         Factor         Batch         Prepared         Analyzed         Method         Notes           SN-5-20 Rep (£008033-06) Vapor         Sampled: 07-Aug-19         Received: 07-Aug-19         Received: 07-Aug-19         Vector         J.R. Report           1,1,12-Tetrachlorochane         ND         40         100 $v$ -         - <th></th> <th></th> <th></th> <th>Reporting</th> <th></th> <th>Dilution</th> <th></th> <th></th> <th></th> <th></th> <th></th>				Reporting		Dilution					
SV-5-20 Rep (E908033-06) Vagor         Sampled: 07-Aug-19         Received: 07-Aug-19         U         LH per Value         J- Report           1,1,12-Tetrachloroethane         ND         40         100         "	Analyte	Result	MDL	Limit	Units	Factor	Batch	Prepared	Analyzed	Method	Notes
1,1,2-Tetrachloroethane       ND       40       100       ug/m3       0.01       EH90702       07-Aug-19       H&P \$2608V         m,p-Xylene       ND       40       100       """"""""""""""""""""""""""""""""""""	SV-5-20 Rep (E908033-06) Vapor	Sampled: 07-Aug-19	Received:	07-Aug-19							J- Report
m,p-Xylene     ND     40     100     ·     ·     ·     ·     ·     ·     ·     ·       o-Xylene     ND     40     100     ·     ·     ·     ·     ·     ·     ·       Styrene     ND     40     100     ·     ·     ·     ·     ·     ·     ·       Isoproprylbenzene (Cumene)     ND     40     100     ·     ·     ·     ·     ·     ·       1,1,2,2-Terichloropopane     ND     40     100     ·     ·     ·     ·     ·     ·       1,2,3-Trichloropopane     ND     40     100     ·     ·     ·     ·     ·     ·     ·       1,3-Strinethylbenzene     ND     40     100     ·     ·     ·     ·     ·     ·       1,3-Strinethylbenzene     ND     40     100     ·     ·     ·     ·     ·     ·       2-Chlorotoluene     ND     40     100     ·     ·     ·     ·     ·     ·       1,4-Trinethylbenzene     ND     40     100     ·     ·     ·     ·     ·     ·       1,4-Dichlorobenzene     ND     40     100     ·     · <td>1,1,1,2-Tetrachloroethane</td> <td>ND</td> <td>40</td> <td>100</td> <td>ug/m3</td> <td>0.01</td> <td>EH90702</td> <td>07-Aug-19</td> <td>07-Aug-19</td> <td>H&amp;P 8260SV</td> <td></td>	1,1,1,2-Tetrachloroethane	ND	40	100	ug/m3	0.01	EH90702	07-Aug-19	07-Aug-19	H&P 8260SV	
o-Xylene       ND       40       100       * <t< td=""><td>m,p-Xylene</td><td>ND</td><td>40</td><td>100</td><td>"</td><td>"</td><td>"</td><td>"</td><td>"</td><td>"</td><td></td></t<>	m,p-Xylene	ND	40	100	"	"	"	"	"	"	
Shyrene     ND     40     100     "	o-Xylene	ND	40	100	"	"	"	"	"	"	
Bromoform       ND       40       100       "       <	Styrene	ND	40	100	"	"	"	"	"	"	
Isopropylenzene (Cumene)       ND       40       100       " <th< td=""><td>Bromoform</td><td>ND</td><td>40</td><td>100</td><td>"</td><td>"</td><td>"</td><td>"</td><td>"</td><td>"</td><td></td></th<>	Bromoform	ND	40	100	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane       ND       40       100       " <t< td=""><td>Isopropylbenzene (Cumene)</td><td>ND</td><td>40</td><td>100</td><td>"</td><td>"</td><td>"</td><td>"</td><td>"</td><td>"</td><td></td></t<>	Isopropylbenzene (Cumene)	ND	40	100	"	"	"	"	"	"	
1,2,3-Trichloropropane       ND       40       100       " <th"< th="">       "       "       "&lt;</th"<>	1,1,2,2-Tetrachloroethane	ND	40	100	"	"	"	"	"	"	
n-Propylbenzene ND 40 100 " " " " " " " " " " " " " " " " "	1,2,3-Trichloropropane	ND	40	100	"	"	"	"	"	"	
Bromobenzene       ND       40       100       " <th"< th="">       "       "</th"<>	n-Propylbenzene	ND	40	100	"	"	"	"	"	"	
1,3,5-Trimethylbenzene       ND       40       100       " <th"< th="">       "       "       "&lt;</th"<>	Bromobenzene	ND	40	100	"	"	"	"	"	"	
2-Chlorotoluene       ND       40       100       "	1,3,5-Trimethylbenzene	ND	40	100	"	"	"	"	"	"	
4-Chlorotoluene       ND       40       100       " <th"< th="">       "       "</th"<>	2-Chlorotoluene	ND	40	100	"	"	"	"	"	"	
tert-Butylbenzene       ND       40       100       "	4-Chlorotoluene	ND	40	100	"	"	"	"	"	"	
1,2,4-Trimethylbenzene       ND       40       100       """"""""""""""""""""""""""""""""""""	tert-Butylbenzene	ND	40	100	"	"	"	"	"	"	
sec-Butylbenzene       ND       40       100       """"""""""""""""""""""""""""""""""""	1,2,4-Trimethylbenzene	ND	40	100	"	"	"	"	"	"	
p-Isopropyltoluene       ND       40       100       " <td>sec-Butylbenzene</td> <td>ND</td> <td>40</td> <td>100</td> <td>"</td> <td>"</td> <td>"</td> <td>"</td> <td>"</td> <td>"</td> <td></td>	sec-Butylbenzene	ND	40	100	"	"	"	"	"	"	
1,3-Dichlorobenzene       ND       40       100       """"""""""""""""""""""""""""""""""""	p-Isopropyltoluene	ND	40	100	"	"	"	"	"	"	
ND       40       100       " <td>1,3-Dichlorobenzene</td> <td>ND</td> <td>40</td> <td>100</td> <td>"</td> <td>"</td> <td>"</td> <td>"</td> <td>"</td> <td>"</td> <td></td>	1,3-Dichlorobenzene	ND	40	100	"	"	"	"	"	"	
n-Butylbenzene       ND       40       100       " <th"< th="">       "       "</th"<>	1,4-Dichlorobenzene	ND	40	100	"	"	"	"	"	"	
ND       40       100       """"""""""""""""""""""""""""""""""""	n-Butylbenzene	ND	40	100	"	"	"	"	"	"	
ND       400       1000       """"""""""""""""""""""""""""""""""""	1,2-Dichlorobenzene	ND	40	100	"	"	"	"	"	"	
ND       40       100       " <td>1,2-Dibromo-3-chloropropane</td> <td>ND</td> <td>400</td> <td>1000</td> <td>"</td> <td>"</td> <td>"</td> <td>"</td> <td>"</td> <td>"</td> <td></td>	1,2-Dibromo-3-chloropropane	ND	400	1000	"	"	"	"	"	"	
Hexachlorobutadiene       ND       40       100       " <td>1,2,4-Trichlorobenzene</td> <td>ND</td> <td>40</td> <td>100</td> <td>"</td> <td>"</td> <td>"</td> <td>"</td> <td>"</td> <td>"</td> <td></td>	1,2,4-Trichlorobenzene	ND	40	100	"	"	"	"	"	"	
Naphthalene         ND         20         20         """"""""""""""""""""""""""""""""""""	Hexachlorobutadiene	ND	40	100	"	"	"	"	"	"	
ND       40       100       " <td>Naphthalene</td> <td>ND</td> <td>20</td> <td>20</td> <td>"</td> <td>"</td> <td>"</td> <td>"</td> <td>"</td> <td>"</td> <td></td>	Naphthalene	ND	20	20	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane       104 %       75-125       " <td>1,2,3-Trichlorobenzene</td> <td>ND</td> <td>40</td> <td>100</td> <td>"</td> <td>"</td> <td>"</td> <td>"</td> <td>"</td> <td>"</td> <td></td>	1,2,3-Trichlorobenzene	ND	40	100	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4       113 %       75-125       "       "       "       "         Surrogate: Toluene-d8       99.4 %       75-125       "       "       "       "       "         Surrogate: 4-Bromofluorobenzene       89.9 %       75-125       "       "       "       "       "	Surrogate: Dibromofluoromethane			104 %	75-12	25	"	"	"	"	
Surrogate: Toluene-d8       99.4 %       75-125       "       "       "       "         Surrogate: 4-Bromofluorobenzene       89.9 %       75-125       "       "       "       "	Surrogate: 1.2-Dichloroethane-d4			113 %	75-12	25	"	"	"	"	
Surrogate: 4-Bromofluorobenzene 89.9 % 75-125 " " " " "	Surrogate: Toluene-d8			99.4 %	75-12	25	"	"	"	"	
	Surrogate: 4-Bromofluorobenzene			89.9 %	75-12	25	"	"	"	"	

Geocon Consultants, Inc Burbank 3303 N. San Fernando Blvd. Burbank, CA 91504		Pr Project Nu Project Ma	roject: GC imber: A9 nager: Mil	080719-L6 622-77-03 / ke Conkle	Rev S Soto St			Repo 11-S	orted: ep-19 12:32	1
	Volatile Organic	Compound	ds by H	&P 8260	SV - Qu	ality Co	ntrol			
	1	H&P Mobi	le Geocl	nemistry,	, Inc.					
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH90702 - EPA 5030										
Blank (EH90702-BLK1)				Prepared &	k Analyzed:	07-Aug-19				
1,1-Difluoroethane (LCC)	ND	100	ug/m3							
Dichlorodifluoromethane (F12)	ND	100	"							
Chloromethane	ND	100	"							
Vinyl chloride	ND	10	"							
Bromomethane	ND	100	"							
Chloroethane	ND	100	"							
Trichlorofluoromethane (F11)	ND	100	"							
1,1-Dichloroethene	ND	100	"							
1,1,2 Trichlorotrifluoroethane (F113)	ND	100	"							
Methylene chloride (Dichloromethane)	ND	100	"							
Methyl tertiary-butyl ether (MTBE)	ND	100	"							
trans-1,2-Dichloroethene	ND	100	"							
1,1-Dichloroethane	ND	100	"							
2,2-Dichloropropane	ND	100	"							
cis-1,2-Dichloroethene	ND	100	"							
Chloroform	ND	20	"							
Bromochloromethane	ND	100	"							
1,1,1-Trichloroethane	ND	100	"							
1,1-Dichloropropene	ND	100	"							
Carbon tetrachloride	ND	20	"							
1,2-Dichloroethane (EDC)	ND	20	"							
Benzene	20	20	"							B-03, J
Trichloroethene	ND	20	"							
1,2-Dichloropropane	ND	100	"							
Bromodichloromethane	ND	100	"							
Dibromomethane	ND	100	"							
cis-1,3-Dichloropropene	ND	100	"							
Toluene	ND	200	"							
trans-1,3-Dichloropropene	ND	100	"							
1,1,2-Trichloroethane	ND	100	"							
1,2-Dibromoethane (EDB)	ND	100	"							
1,3-Dichloropropane	ND	100	"							
Tetrachloroethene	ND	20	"							
Dibromochloromethane	ND	100	"							

Volatile Organic Compounds by H&P 8260SV - Quality Control H&P Mobile Geochemistry, Inc.           Analyte         Reporting Lant         Spike Level         Source Keall         %REC         RPD Lants         RPD Lants         Notes           Batch EH90702 - EPA 5030         Batch EH90702 - BA 5030         Prepared & Analyzed: 07-Aug-19         Instants         Notes           Batch EH90702 - BLK1)         Prepared & Analyzed: 07-Aug-19         Instants         Instants         Instants           Chlorobenzere         ND         100         *         Instants         Instants         Instants           Stryben         ND         100         *         Instants         Instants         Instants           Strycea         ND         100         *         Instants         Instants         Instants           Bromoferin         ND         100         *         Instants         Instants         Instants           11,22-Tetrathorochane         ND         100         *         Instants         Instants         Instants           11,23-Trintelyhorochane         ND         100         *         Instants         Instants         Instants           11,23-Trintelyhorochane         ND         100         *         Instants         Instants <th>Geocon Consultants, Inc Burbank 3303 N. San Fernando Blvd. Burbank, CA 91504</th> <th></th> <th>Pr Project Nu Project Mar</th> <th>roject: GC mber: A9 nager: Mil</th> <th>080719-L6 I 622-77-03 / S ke Conkle</th> <th>Rev S Soto St</th> <th></th> <th></th> <th>Repo 11-S</th> <th>orted: ep-19 12:32</th> <th>2</th>	Geocon Consultants, Inc Burbank 3303 N. San Fernando Blvd. Burbank, CA 91504		Pr Project Nu Project Mar	roject: GC mber: A9 nager: Mil	080719-L6 I 622-77-03 / S ke Conkle	Rev S Soto St			Repo 11-S	orted: ep-19 12:32	2
H&P Mobile Geock-mistry, Inc.           Analyte         Reporting Limit         Spike Units         Source Level         % BCC         Limit         RPD Limit         RPD Modes           Bark CH190702-EPA S030           Prepared & Analyzet:         07-Aug-19         Limit         Notes           Bark CH190702-B1 K()         Prepared & Analyzet:         07-Aug-19		Volatile Organic	Compound	ls by H	&P 8260	SV - Qu	ality Co	ntrol			
Reporting Limit         Spike Live         Source Result         %AEC %AREC         RPD Limit         RPD Limit         Notes           Bath (E190702 - EPA 50.00              Notes          Notes          Notes          Notes          Notes          Notes          Notes          Notes          Notes          Notes          Notes          Notes          Notes           Notes           Notes           Notes           Notes             Notes           Notes              Notes		H	H&P Mobi	le Geocl	hemistry,	Inc.					
Batch FL90702 - EPA 5030           Black (FL90702-BLX1)         Prepared & Analyzed: 07-Aug-19           Chlorobarzone         ND         20         ug/m3           Eihylbenzene         ND         100         -           Inj.2-Fitzahörethane         ND         100         -           mp-Xylene         ND         100         -           Syrene         ND         100         -           Syrene         ND         100         -           Bromoforn         ND         100         -           Syrene         ND         100         -           Bromoforn         ND         100         -           Syrene         ND         100         -           Propylenzene (Curane)         ND         100         -           1.1.2.3-Teitachloroethane         ND         100         -           1.3.5-Timethylbeazene         ND         100         -           2.3.1-Teithoroethane         ND         100         -           1.3.2-Teitachloroethane         ND         100         -           1.3.5-Timethylbeazene         ND         100         -           1.3.5-Tokloroethane         ND         100 <th>Analyte</th> <th>Result</th> <th>Reporting Limit</th> <th>Units</th> <th>Spike Level</th> <th>Source Result</th> <th>%REC</th> <th>%REC Limits</th> <th>RPD</th> <th>RPD Limit</th> <th>Notes</th>	Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Bink (£199702.3LX1)         Prepared & Analyzed: 07-Aug-19           Chlorobenzene         ND         20         ug/m3           Eihlythervene         ND         100         *           J.1,2-Tertachkorethane         ND         100         *           m.p-Xylene         ND         100         *           Syrete         ND         100         *           Bromoform         ND         100         *           ND         100         *         *           Syrete         ND         100         *           Bromoform         ND         100         *           12.3-Trichloropethane         ND         100         *           12.3-Trichloropopane         ND         100         *           12.5-Trinchlythenzene         ND         100         *           2-Chlorotolucne         ND         100         *           2-Chlorotolucne         ND         100         *           2-Chlorotolucne         ND         100         *           2-Chlorotolucne         ND         100         *           13.5-Trinchythenzene         ND         100         *           2-Laborton-S-hotoproprane	Batch EH90702 - EPA 5030										
ND         20         ug/mJ           Ediylsbarane         ND         100         "           Ediylsbarane         ND         100         "           m, Xylene         ND         100         "           o-Xylene         ND         100         "           o-Xylene         ND         100         "           o-Xylene         ND         100         "           Styrene         ND         100         "           Storeget         ND         100         "           Isoprogylbenzene (Cumene)         ND         100         "           1,1,2.2-Titrakhoroethane         ND         100         "           1,2,3-Titrakhoroethane         ND         100         "           1,2,3-Titrakhoroethane         ND         100         "           1,2,3-Titrakhoroethane         ND         100         "           1,2,3-Titrakhoroethane         ND         100         "           1,2,3-Titrakhoroethane         ND         100         "           1,3.5-Titrakhylbenzene         ND         100         "           1,3.4-Titrakhylbenzene         ND         100         "           1,2.4-Titrakhylbe	Blank (FH90702-BLK1)				Prepared &	Analyzed:	07-Aug-19	)			
EtalyBenzene       ND       100       *         L1,1,2-Tetachloroethane       ND       100       *         m.p-Xylene       ND       100       *         Syrone       ND       100       *         Bromoform       ND       100       *         Syrone       ND       100       *         Bromoform       ND       100       *         1,1,2-Tetachloroethane       ND       100       *         1,2,3-Tetachloroethane       ND       100       *         Bromobernzene       ND       100       *         Bromobernzene       ND       100       *         L2,3-Tetachloroethane       ND       100       *         Bromobernzene       ND       100       *         Strongthylenzene       ND       100       *         L2,4-Timethylbenzene       ND       100       *         L2,4-Timethylbenzene       ND       100       *         L2,4-Timethylbenzene       ND       100       *         L2,4-Timethylbenzene       ND       100       *         L3,5-Tichlorobenzene       ND       100       *         L2,4-Timethylbenzene	Chlorobenzene	ND	20	ug/m3	1						
In J.2Tertachiloroethane       ND       100       -         mp-Xylene       ND       100       -         oxSylene       ND       100       -         Strone       ND       100       -         Bromoform       ND       100       -         Isopropilorzene (Curnene)       ND       100       -         1,2.3Trichloropopane       ND       100       -	Ethylbenzene	ND	100	"							
mp-Xylene         ND         100         *           x-Xylene         ND         100         *           x-Sylene         ND         100         *           Styrene         ND         100         *           Bromoform         ND         100         *           Isopropylenzene (Cumene)         ND         100         *           1,1,2,2-trianklorochanae         ND         100         *           1,2,3-Trichkoropopane         ND         100         *           n-Propylenzene         ND         100         *           1,3-S-Trimethyltenzene         ND         100         *           2-Chlorotoluene         ND         100         *           1,2-Trimethyltenzene         ND         100         *           2-Chlorotoluene         ND         100         *           2-Chlorotoluene         ND         100         *           2-Chlorotoluene         ND         100         *           2-Chlorotoluene         ND         100         *           2-Chlorotoluene         ND         100         *           1,2-Trinchyltenzene         ND         100         *           1,	1,1,2-Tetrachloroethane	ND	100	"							
ND         ND         ND         ND           Styrme         ND         100         *           Bromoform         ND         100         *           Bromoform         ND         100         *           Bromoform         ND         100         *           1,1,2.3-Tretholroopropane         ND         100         *           n-Propylbarzene         ND         100         *           Bromoform         ND         100         *           1,2.3-Tretholroopropane         ND         100         *           n-Propylbarzene         ND         100         *           2-Chlorooluere         ND         100         *           2-Chlorooluere         ND         100         *           4-Chlorooluere         ND         100         *           12.4-Trinethylbarzene         ND         100         *           12.4-Trinethylbarzene         ND         100         *           13.5-Enkloroberzene         ND         100         *           1.4-Dichloroberzene         ND         100         *           1.2-Dichloroberzene         ND         100         *           1.2-Dichlorobe	m,p-Xylene	ND	100	"							
ND         100         *           Bromoform         ND         100         *           Isopropilonzene (Cumene)         ND         100         *           1,2.3-Trichlorobenhane         ND         100         *           1,2.3-Trichlorobenhane         ND         100         *           n-Propylehrzene         ND         100         *           1.3.5-Trinchlybenzene         ND         100         *           2.4.1horotohuene         ND         100         *           2.4.1horotohuene         ND         100         *           2.4.1horotohuene         ND         100         *           2.4.1horotohuene         ND         100         *           1.3.4.1Trinchlybenzene         ND         100         *           1.3.4.1hrinchlybenzene         ND         100         *           1.3.Dichlorobenzene         ND         100         *           1.3.Dichlorobenzene         ND         100         *           1.4.1brichlorobenzene         ND         100         *           1.2.Diklorobenzene         ND         100         *           1.2.Diklorobenzene         ND         100         *	o-Xylene	ND	100	"							
Oronoform         ND         100         "           Isopropylbnzene (Cumene)         ND         100         "           1,1,2,2-Tetachloroethane         ND         100         "           1,2,3-Trichloropropane         ND         100         "           n-Propylbenzene         ND         100         "           13,5-Triinethylbenzene         ND         100         "           2-Chlorotoluene         ND         100         "           4-Chlorotoluene         ND         100         "           12,4-Trimethylbenzene         ND         100         "           12,4-Trimethylbenzene         ND         100         "           12,4-Trimethylbenzene         ND         100         "           13,5-Dichlorobenzene         ND         100         "           1,3-Dichlorobenzene         ND         100         "           1,3-Dichlorobenzene         ND         100         "           1,3-Dichlorobenzene         ND         100         "           1,2-Dichlorobenzene         ND         100         "           1,2-Dichlorobenzene         ND         100         "           1,2-Dichlorobenzene         ND	Styrene	ND	100	"							
Isopropylenzene (Cumene)       ND       100       "         1,1,2,3-Tirichloropopane       ND       100       "         n-Propylenzene       ND       100       "         Bomobenzene       ND       100       "         13,5-Trinethylbenzene       ND       100       "         2-Chlorotoluene       ND       100       "         4-Chlorotoluene       ND       100       "         1,2,4-Trinethylbenzene       ND       100       "         1,2,4-Trinethylbenzene       ND       100       "         1,2,4-Trinethylbenzene       ND       100       "         1,2,4-Trinethylbenzene       ND       100       "         1,3-Dichlorobenzene       ND       100       "         1,4-Dichlorobenzene       ND       100       "         1,4-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100	Bromoform	ND	100	"							
1,1,2,2-Tetrachloroptopane       ND       100       "         1,2,3-Trichloroptopane       ND       100       "         n-Propyllenzene       ND       100       "         Bromobenzene       ND       100       "         J.3-Trichlybenzene       ND       100       "         2-Chlorotoluene       ND       100       "         4-Chlorotoluene       ND       100       "         4-Chlorotoluene       ND       100       "         1,2,4-Trinethylbenzene       ND       100       "         1,2,4-Trinethylbenzene       ND       100       "         1,2,4-Trinethylbenzene       ND       100       "         p-Isopropyltoluene       ND       100       "         1,4-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       " <td>Isopropylbenzene (Cumene)</td> <td>ND</td> <td>100</td> <td>"</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Isopropylbenzene (Cumene)	ND	100	"							
1,2,3-Trichloropropane       ND       100       "         n-Propylbenzene       ND       100       "         Bromohonzene       ND       100       "         Bromohonzene       ND       100       "         1,3,5-Trinethylbenzene       ND       100       "         4-Chlorotoluene       ND       100       "         4-Chlorotoluene       ND       100       "         1,2,4-Trinethylbenzene       ND       100       "         1,2,4-Trinethylbenzene       ND       100       "         1,3,5-Trinethylbenzene       ND       100       "         1,3,5-Trinethylbenzene       ND       100       "         1,2,4-Trinethylbenzene       ND       100       "         1,3,5-Trinethylbenzene       ND       100       "         1,3,5-Trichlorobenzene       ND       100       "         1,4-Dichlorobenzene       ND       100       "         1,2,4-Trichlorobenzene       ND       100       "         1,2,4-Trichlorobenzene       ND       100       "         1,2,4-Trichlorobenzene       ND       100       "         1,2,4-Trichlorobenzene       ND       100 </td <td>1,1,2,2-Tetrachloroethane</td> <td>ND</td> <td>100</td> <td>"</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	1,1,2,2-Tetrachloroethane	ND	100	"							
n-Propylbenzene       ND       100       "         Bromobenzene       ND       100       "         13,5-Trimethylbenzene       ND       100       "         2-Chlorotoluene       ND       100       "         4-Chlorotoluene       ND       100       "         4-Chlorotoluene       ND       100       "         4-Chlorotoluene       ND       100       "         1,2,4-Trimethylbenzene       ND       100       "         sec-Butylbenzene       ND       100       "         p-Isopropyltoluene       ND       100       "         1,3-Dichlorobenzene       ND       100       "         1,4-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Lichlorobenzene       ND       100       "         1,2-Lichlorobenzene       ND       100       "         1,2-Lichlorobenzene       ND       100       "         Surrogate: Dibromofluoronethane       \$24       \$500       105	1,2,3-Trichloropropane	ND	100	"							
Bronobenzene       ND       100       "         1,3,5-Trimethylbenzene       ND       100       "         2-Chlorotoluene       ND       100       "         4-Chlorotoluene       ND       100       "         4-Chlorotoluene       ND       100       "         4-Chlorotoluene       ND       100       "         1,4-Trimethylbenzene       ND       100       "         see-Butylbenzene       ND       100       "         -J-Stoihorobenzene       ND       100       "         -J-Joiholorobenzene       ND       100       "         -J-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Joihorobenzene       ND       100       "         1,2-Jarrichlorobenzene       ND       100       "         1,2-Jarrichlorobenzene       ND       100       "         1,2-Jarrichlorobenzene       ND       100       "         1,2-Jarrichlorobenzene       ND       100       "         1,2-Jarrichlorobenzene       ND       100       "	n-Propylbenzene	ND	100	"							
1,3,5-Trimethylbenzene       ND       100       "         2-Chlorotoluene       ND       100       "         4-Chlorotoluene       ND       100       "         4-Chlorotoluene       ND       100       "         4-Chlorotoluene       ND       100       "         1,2,4-Trimethylbenzene       ND       100       "         1,2,4-Trimethylbenzene       ND       100       "         p-lsopropyllouene       ND       100       "         1,3-Dichlorobenzene       ND       100       "         1,4-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2.2-Trichlorobenzene       ND       100       "         1,2.3-Trichlorobenzene       ND       100       "         Surrogat: .12-Dichloroethane-44       533       500	Bromobenzene	ND	100	"							
2-Chlorotoluene       ND       100       "         4-Chlorotoluene       ND       100       "         4-Chlorotoluene       ND       100       "         tert-Butylbenzene       ND       100       "         sec-Butylbenzene       ND       100       "         p-Isopropyltoluene       ND       100       "         1,3-Dichlorobenzene       ND       100       "         1,4-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Jirichlorobenzene       ND       100       "         1,2-Jirichlorobenzene       ND       100       " </td <td>1,3,5-Trimethylbenzene</td> <td>ND</td> <td>100</td> <td>"</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	1,3,5-Trimethylbenzene	ND	100	"							
4-Chlorotoluene       ND       100       "         tert-Butylbenzene       ND       100       "         1,2,4-Trimethylbenzene       ND       100       "         sec-Butylbenzene       ND       100       "         p-Isopropyltoluene       ND       100       "         1,3-Dichlorobenzene       ND       100       "         1,4-Dichlorobenzene       ND       100       "         n-Butylbenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Dibromo-3-chloropropane       ND       100       "         1,2,4-Trichlorobenzene       ND       100       "         1,2,4-Trichlorobenzene       ND       100       "         1,2,3-Trichlorobenzene       ND       100       "         1,2,3-Trichlorobenzene       ND       100       "         1,2,3-Trichlorobenzene       ND       100       "         Surrogate: Dibromofluoromethane       524       "       500       105       75-125         Surrog	2-Chlorotoluene	ND	100	"							
tert-Butylbenzene       ND       100       "         1,2,4-Trimethylbenzene       ND       100       "         sec-Butylbenzene       ND       100       "         p-Isopropyltoluene       ND       100       "         1,3-Dichlorobenzene       ND       100       "         1,4-Dichlorobenzene       ND       100       "         n-Butylbenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         Naphthalene       ND       20       "         Napithalene       ND       20       "         Surrogate: Ilz-Dichloroethane-d4       533       "       500       105       75-125         Surrogate: Toluene-d8       476       "       500       95.1       75-125         Surrogate: Toluene-d8       476       "       500       89.7	4-Chlorotoluene	ND	100	"							
1,2,4-Trimethylbenzene       ND       100       "         sec-Butylbenzene       ND       100       "         p-Isopropyltoluene       ND       100       "         1,3-Dichlorobenzene       ND       100       "         1,4-Dichlorobenzene       ND       100       "         n-Butylbenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         Naphthalene       ND       20       "         NSurrogate: Dibromofluoromethane       524       "       500       105       75-125         Surrogate: I.2-Dichloroethane-d4       533       "       500       89.7       75-125         Surrogate: H-Bromofluorobenzene       449       "       500       89.7       75-125	tert-Butylbenzene	ND	100	"							
sec-Butylbenzene ND 100 " p-Isopropyltoluene ND 100 " 1,3-Dichlorobenzene ND 100 " 1,4-Dichlorobenzene ND 100 " 1,2-Dichlorobenzene ND 100 " 1,2-Dichlorobenzene ND 100 " 1,2,4-Trichlorobenzene ND 100 " Hexachlorobutadiene ND 20 " Naphthalene ND 20 " Surrogate: Dibromofluoromethane 524 " 500 105 75-125 Surrogate: 1,2-Dichlorobenzene 476 " 500 95.1 75-125 Surrogate: 1-2-Dichlorobenzene 449 " 500 89.7 75-125	1,2,4-Trimethylbenzene	ND	100	"							
p-Isopropyltoluene       ND       100       "         1,3-Dichlorobenzene       ND       100       "         1,4-Dichlorobenzene       ND       100       "         n-Butylbenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       1000       "         1,2-Dichlorobenzene       ND       1000       "         1,2,4-Trichlorobenzene       ND       1000       "         Hexachlorobutadiene       ND       20       "         Naphthalene       ND       20       "         sturrogate: Dibromofluoromethane       524       "       500       105       75-125         sturrogate: Toluene-d8       476       "       500       95.1       75-125         Sturrogate: 4-Bromofluorobenzene       449       "       500       89.7       75-125	sec-Butylbenzene	ND	100	"							
ND       100       "         1,4-Dichlorobenzene       ND       100       "         n-Butylbenzene       ND       100       "         n-Butylbenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Dichlorobenzene       ND       1000       "         1,2-Dibromo-3-chloropropane       ND       1000       "         1,2,4-Trichlorobenzene       ND       100       "         Hexachlorobutadiene       ND       100       "         Naphthalene       ND       20       "         1,2,3-Trichlorobenzene       ND       100       "         Surrogate: Dibromofluoromethane       524       "       500       105       75-125         Surrogate: Dibromofluoromethane-d4       533       "       500       107       75-125         Surrogate: Toluene-d8       476       "       500       95.1       75-125         Surrogate: t-Bromofluorobenzene       449       "       500       89.7       75-125	p-Isopropyltoluene	ND	100	"							
1,4-Dichlorobenzene       ND       100       "         n-Butylbenzene       ND       100       "         1,2-Dichlorobenzene       ND       100       "         1,2-Dibromo-3-chloropropane       ND       1000       "         1,2,4-Trichlorobenzene       ND       100       "         1,2,4-Trichlorobenzene       ND       100       "         Hexachlorobutadiene       ND       100       "         Naphthalene       ND       20       "         1,2,3-Trichlorobenzene       ND       100       "         Surrogate: Dibromofluoromethane       524       "       500       105       75-125         Surrogate: 1,2-Dichloroethane-d4       533       "       500       107       75-125         Surrogate: Toluene-d8       476       "       500       95.1       75-125         Surrogate: 4-Bromofluorobenzene       449       "       500       89.7       75-125	1,3-Dichlorobenzene	ND	100	"							
n-Butylbenzene ND 100 " 1,2-Dichlorobenzene ND 100 " 1,2-Dibromo-3-chloropropane ND 1000 " 1,2,4-Trichlorobenzene ND 100 " Hexachlorobutadiene ND 100 " Naphthalene ND 20 " 1,2,3-Trichlorobenzene ND 100 " Surrogate: Dibromofluoromethane 524 " 500 105 75-125 Surrogate: 1,2-Dichloroethane-d4 533 " 500 107 75-125 Surrogate: Toluene-d8 476 " 500 95.1 75-125 Surrogate: 4-Bromofluorobenzene 449 " 500 89.7 75-125	1,4-Dichlorobenzene	ND	100	"							
ND       100       "         1,2-Dichlorobenzene       ND       1000       "         1,2-Dibromo-3-chloropropane       ND       1000       "         1,2,4-Trichlorobenzene       ND       100       "         Hexachlorobutadiene       ND       100       "         Naphthalene       ND       20       "         1,2,3-Trichlorobenzene       ND       100       "         Surrogate: Dibromofluoromethane       524       "       500       105       75-125         Surrogate: I,2-Dichloroethane-d4       533       "       500       107       75-125         Surrogate: Toluene-d8       476       "       500       95.1       75-125         Surrogate: 4-Bromofluorobenzene       449       "       500       89.7       75-125	n-Butylbenzene	ND	100	"							
ND       1000       "         1,2,4-Trichlorobenzene       ND       100       "         Hexachlorobutadiene       ND       100       "         Naphthalene       ND       20       "         1,2,3-Trichlorobenzene       ND       100       "         Surrogate: Dibromofluoromethane       524       "       500       105       75-125         Surrogate: I,2-Dichloroethane-d4       533       "       500       107       75-125         Surrogate: Toluene-d8       476       "       500       95.1       75-125         Surrogate: 4-Bromofluorobenzene       449       "       500       89.7       75-125	1,2-Dichlorobenzene	ND	100	"							
ND       100       "         Hexachlorobutadiene       ND       100       "         Naphthalene       ND       20       "         1,2,3-Trichlorobenzene       ND       100       "         Surrogate: Dibromofluoromethane       524       "       500       105       75-125         Surrogate: I,2-Dichloroethane-d4       533       "       500       107       75-125         Surrogate: Toluene-d8       476       "       500       95.1       75-125         Surrogate: 4-Bromofluorobenzene       449       "       500       89.7       75-125	1,2-Dibromo-3-chloropropane	ND	1000	"							
Hexachlorobutadiene         ND         100         "           Naphthalene         ND         20         "           1,2,3-Trichlorobenzene         ND         100         "           Surrogate: Dibromofluoromethane         524         "         500         105         75-125           Surrogate: 1,2-Dichloroethane-d4         533         "         500         107         75-125           Surrogate: Toluene-d8         476         "         500         95.1         75-125           Surrogate: 4-Bromofluorobenzene         449         "         500         89.7         75-125	1,2,4-Trichlorobenzene	ND	100	"							
Naphthalene         ND         20         "           1,2,3-Trichlorobenzene         ND         100         "           Surrogate: Dibromofluoromethane         524         "         500         105         75-125           Surrogate: 1,2-Dichloroethane-d4         533         "         500         107         75-125           Surrogate: Toluene-d8         476         "         500         95.1         75-125           Surrogate: 4-Bromofluorobenzene         449         "         500         89.7         75-125	Hexachlorobutadiene	ND	100	"							
ND       100       "         Surrogate: Dibromofluoromethane       524       "       500       105       75-125         Surrogate: 1,2-Dichloroethane-d4       533       "       500       107       75-125         Surrogate: Toluene-d8       476       "       500       95.1       75-125         Surrogate: 4-Bromofluorobenzene       449       "       500       89.7       75-125	Naphthalene	ND	20	"							
Surrogate: Dibromofluoromethane       524       "       500       105       75-125         Surrogate: 1,2-Dichloroethane-d4       533       "       500       107       75-125         Surrogate: Toluene-d8       476       "       500       95.1       75-125         Surrogate: 4-Bromofluorobenzene       449       "       500       89.7       75-125	1,2,3-Trichlorobenzene	ND	100	"							
Surrogate: 1,2-Dichloroethane-d4       533       "       500       107       75-125         Surrogate: Toluene-d8       476       "       500       95.1       75-125         Surrogate: 4-Bromofluorobenzene       449       "       500       89.7       75-125	Surrogate: Dibromofluoromethane	524		"	500		105	75-125			
Surrogate: Toluene-d8     476     " 500     95.1     75-125       Surrogate: 4-Bromofluorobenzene     449     " 500     89.7     75-125	Surrogate: 1,2-Dichloroethane-d4	533		"	500		107	75-125			
Surrogate: 4-Bromofluorobenzene 449 " 500 89.7 75-125	Surrogate: Toluene-d8	476		"	500		95.1	75-125			
	- Surrogate: 4-Bromofluorobenzene	449		"	500		89.7	75-125			

Geocon Consultants, Inc Burbank 3303 N. San Fernando Blvd. Burbank, CA 91504	Project: Project Number: Project Manager:	GC080719-L6 Rev A9622-77-03 / S Soto St Mike Conkle	Reported: 11-Sep-19 12:32
	Volatile Organic Compounds by	H&P 8260SV - Quality Control	

	E	I&P Mobi	le Geocl	hemistry,	Inc.					
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH90702 - EPA 5030										
LCS (EH90702-BS1)				Prepared &	Analyzed:	07-Aug-19	)			
Dichlorodifluoromethane (F12)	3700	400	ug/m3	5000		73.6	70-130			
Vinyl chloride	4400	40	"	5000		88.2	70-130			
Chloroethane	4700	400	"	5000		94.7	70-130			
Trichlorofluoromethane (F11)	4300	400	"	5000		86.7	70-130			
1,1-Dichloroethene	4100	400	"	5000		82.0	70-130			
1,1,2 Trichlorotrifluoroethane (F113)	4400	400	"	5000		88.8	70-130			
Methylene chloride (Dichloromethane)	4400	400	"	5000		88.8	70-130			
trans-1,2-Dichloroethene	4200	400	"	5000		83.5	70-130			
1,1-Dichloroethane	4200	400	"	5000		84.4	70-130			
cis-1,2-Dichloroethene	4300	400	"	5000		85.2	70-130			
Chloroform	4300	80	"	5000		86.8	70-130			
1,1,1-Trichloroethane	3900	400	"	5000		77.9	70-130			
Carbon tetrachloride	3600	80	"	5000		71.7	70-130			
1,2-Dichloroethane (EDC)	4700	80	"	5000		93.5	70-130			
Benzene	3900	80	"	5000		78.2	70-130			
Trichloroethene	4600	80	"	5000		91.4	70-130			
Toluene	3900	800	"	5000		78.9	70-130			
1,1,2-Trichloroethane	4900	400	"	5000		97.3	70-130			
Tetrachloroethene	3700	80	"	5000		73.7	70-130			
Ethylbenzene	3900	400	"	5000		77.2	70-130			
1,1,1,2-Tetrachloroethane	3800	400	"	5000		76.1	70-130			
m,p-Xylene	7700	400	"	10000		77.4	70-130			
o-Xylene	3900	400	"	5000		78.0	70-130			
1,1,2,2-Tetrachloroethane	4900	400	"	5000		98.9	70-130			
Surrogate: Dibromofluoromethane	2110		"	2500		84.2	75-125			
Surrogate: 1,2-Dichloroethane-d4	2160		"	2500		86.4	75-125			
Surrogate: Toluene-d8	1880		"	2500		75.1	75-125			
Surrogate: 4-Bromofluorobenzene	1900		"	2500		75.8	75-125			

2470 Impala Drive Carlsbad, CA 92010 760-804-9678 Phone 760-804-9159 Fax

Geocon Consultants, Inc Burbank	Project:	GC080719-L6 Rev	
3303 N. San Fernando Blvd.	Project Number:	A9622-77-03 / S Soto St	Reported:
Burbank, CA 91504	Project Manager:	Mike Conkle	11-Sep-19 12:32

#### **Notes and Definitions**

- J- Report This sample is reported to the MDL or LOD determined for this method. All confirmed hits above the listed MDL or LOD value and below the RL/LOQ, will be flagged with a "J" result. If an MDL or LOD is not listed, the analyte is ND at the RL.
- J Detected but below the RL/LOQ; therefore, result is an estimated concentration.
- J Detected but below the RL/LOQ; therefore, result is an estimated concentration.
- B-03 Analyte present in the blank above the reported MDL but below the reporting limit.
- B-03 Analyte present in the blank above the reported MDL but below the reporting limit.
- LCC Leak Check Compound
- ND Analyte NOT DETECTED at or above the reporting limit
- MDL Method Detection Limit
- %REC Percent Recovery
- RPD Relative Percent Difference

All soil results are reported in wet weight.

#### Appendix

H&P Mobile Geochemistry, Inc. is approved as an Environmental Testing Laboratory and Mobile Laboratory in accordance with the DoD-ELAP Program and ISO/IEC 17025:2005 programs through PJLA, accreditation number 69070 for EPA Method TO-15, H&P Method TO-15, EPA Method 8260B and H&P 8260SV.

H&P is approved by the State of California as an Environmental Laboratory and Mobile Laboratory in conformance with the Environmental Laboratory Accreditation Program (ELAP) for the category of Volatile and Semi-Volatile Organic Chemistry of Hazardous Waste, certification numbers 2740, 2741, 2743 & 2745.

H&P is approved by the State of Louisiana Department of Environmental Quality under the National Environmental Laboratory Accreditation Conference (NELAC) certification number 04138.

The complete list of stationary and mobile laboratory certifications along with the fields of testing (FOTs) and analyte lists are available at <a href="https://www.handpmg.com/about/certifications">www.handpmg.com/about/certifications</a>.



2470 Impala Drive, Carlsbad, CA 92010 & Field Office - Signal Hill, CA W handpmg.com E info@handpmg.com

# VAPOR / AIR Chain of Custody

DATE: <u>8/7/19</u> Page <u>1</u> of <u>1</u>

	Lab	Client an	d Projec	t Information									5	Sample	e Rec	eipt (La	b Use	Only)	
Lab Client/Consultant: Geocore	Consultan	te Tar		Project Name / #:	A9622	7-03						Date	Rec'd:	8171	119	Control	#:190	682.	0)
Lab Client Project Manager:	Consultan	<u>13, +110</u>	3.06 2 T. J.	Project Location:	19-121 6	Sato S	+	No. Com	aul org	est <sup>in</sup> s.		H&P I	Project	# G(	003	0719	-26		
Lab Client Address: 32-2	e conicie	, Giud		Report E-Mail(s):		2040 3		<u></u>		in a star	的样	Lab V	Vork Or	der#	Ego	8033	2		
Lab Client City, State, Zip:	San ternan	ao Diva		Cont	cle Ogeocov	ninc.cov	m		1			Samp	le Intac	t: 🗌 Y	es 🗌	No 🗌	See No	otes Below	
Phone Number: CLC QUAD	INC CA 915	504		and the state of the second second								Rece	ipt Gau	ge ID:				Temp:	
Banarting Baguiron	88 CX4. 116		urnaroun	d Time	Sar	nnler Info	rmatio	n				Outsid	de Lab:			14 APR			
		C Stand	ard (7 days	o for proliminary	Sampler(s):		mation			er-SR		Recei	pt Note	s/Trackir	ng #:				
	L Leventy	repor	10 days f	or final report)	Signature: 6	The la	10	<u>naciali.</u> P		19 (93) 19 (93)									
	and a second second				Date:	-	100	Angenee		Ann hai									
CA Geotracker Global ID:		Rush	(specify):		Date: 08/0	07/19											Lab F	'M Initials:	
* <b>Preferred VOC units (please c</b> µg/LДµg/m <sup>3</sup> ppbv	choose one):				CONTAINER	∠	5.0	ard Full List	List / Project	T0-15	T0-15	1 TO-15m	phatic Fractic	Compound IPA He	EPA 8015m	by ASTM D1			
SAMPLE NAME	FIELD POINT NAME (if applicable)	DATE mm/dd/yy	TIME 24hr clock	SAMPLE TYPE Indoor Air (IA), Ambient Air (AA), Subslab (SS), Soil Vapor (SV)	400mL/1L/6L Summa, Tedlar, Tube, etc.	CONTAINEF ID (###)	Lab use only Receipt Vac	VOCs Standal 8260SV	VOCs Short L 8260SV	Oxygenates	Naphthalene	TPHv as Gas	Aromatic/Alip	Leak Check C	Methane by E	Fixed Gases I			
5V-1-20		08/07/19	0943	SU	Glass Suringe	287/288		X						$\times$					
SV-2-20			1005		00	232/303		$\ge$			1.11			$\ge$					
SU-3-20			1029		a ser ser progra	287 1288		$\bowtie$			6 13			$\times$	1. 15				
SU-4-20			1053			232 303		$\ge$		Sec.				X					
SV-5-20		5	1117	and the second		287/288		$\ge$						X					1
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FMS004 Revision: 4 Revised: 3/22/2017 Effective: 3/24/2016

Page 1 of 1

#### H? Mobile Geochemistry Inc.

# Log Sheet: Soil Vapor Sampling with Syringe

	H&P Project #:		1	GC08	80719	-L6				Date:			8/7/20	19				
	Site Address:			119-12	21 S Sot	to St		de la		Page:			of					100-
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	Consultant Rep(s):			Mike	e Conl	cle						E	ric Coi	son			Scanned:	YE
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Γ	Sample Info	rmation	n				Pro	obe Sp	ecs				Pu	rge & C	Collectio	on Infor	mation	
	Point ID	Syringe ID	Sample Volume (cc)	Sample Time	Probe Depth (ft)	Tubing Length (ft)	Tubing OD (in.)	Sand Ht (in.)	Sand Dia (in.)	Dry Bent. Ht (in.)	Dry Bent. Dia (in.)	Shut In Test 60 sec (✓)	Leak Check (√)	Purge Vol (mL)	Purge Flow Rate (mL/min)	Pump Time (min:sec)	Sample Flow Rate (mL/min)	ProbeVac
1	5-1-20	287/288	100	0943	20	22	1/8	12	1.5	6	1.5	>	/	740	200	3;42	-200	10
2	51-2-20	303/232	100	1005	20	22	18	/2	1.5	6	1.5	5	>	740	200	3:42	-200	5
3	58-3-20	2881	100	1029	20	22	1/8	12	1.9	6	1.5	V	$\checkmark$	740	200	3:42	-200	10
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5	58-5-20	288/287	100	1117	20	22	18	12	1.5	6	1.5	V	~	740	200	7:42	1200	20
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Site Notes such as weather, visitors, scope deviations, health & safety issues, etc. (When making sample specific notes, reference the line number above):



#### INVOICE

TO: GEOCON	Invoice No.:	19-0685
3303 North Fernando Boulevard Suite 100 Burbank, CA 91504	Invoice Date:	Aug 19, 2019
Project Info: P. Manager - Mike Conkle 119-121 South Soto Street Los Angeles, CA	Client Pr A962 H&P Pro GC08	oject No.: 2-77-03 j. No.: 30719-L6

Qty.	Item	Unit Price	Extended
			4 050 00
1	Strataprobe & 1 Technician - 8/7/19 half day	1,250.00	1,250.00
4	Tech Prevailing Wage (per hour)	65.00	260.00
1	Sampling Consumables (half day)	75.00	75.00
5	Temporary Vapor Probe (each)	10.00	50.00
1	Mobile Lab & Chemist (H&P 8260SV Analyses) - 8/7/19 half day	1,350.00	1,350.00
2	Mobilization Fee (per person / per day)	150.00	300.00

**Total Invoice Amount** 

\$3,285.00

Terms: Net 30: 1.5% interest/mo. thereafter. Federal Tax ID: 26-2246893

Make check payable to H&P Mobile Geochemistry, Inc. Remit to 2470 Impala Drive, Carlsbad, CA 92010





San Francisco Bay Regional Water Quality Control Board

# Fact Sheet: Development on Properties with a Vapor Intrusion Threat – July 2019

The San Francisco Bay Regional Water Board (Regional Water Board) oversees an increasing number of cleanups at properties where volatile organic compounds (VOCs) are present in soil vapor and development is occurring. These VOCs can pose a health threat to building occupants if they migrate into buildings through vapor intrusion (VI). We will continue to require site cleanup where threats to human health or the environment exist. However, we recognize that achieving cleanup standards may take years given currently available remedial technologies, and therefore interim protective measures may be needed. Typically, VI mitigation systems (VIMS) are installed in the interim to mitigate VI threats. VIMS are not a substitute for cleanup. Operation, maintenance, and monitoring (OM&M) and agency oversight are typically warranted to ensure effectiveness. The Regional Water Board's approach to regulating VIMS has evolved since the 2014 release of our *Framework for Assessment of Vapor Intrusion at TCE-Contaminated Sites in the San Francisco Bay Region* (VI Framework). This fact sheet is intended to provide developers, cities, homeowners associations, and the public a summary of expectations for development at sites were VI may pose a threat.

### **Types of VIMS**

Traditional VIMS for the soil vapor intrusion pathway can be divided into two main categories: Subslab Depressurization Systems (SSDS) and Vented VIMS. SSDS rely on active electromechanical means to divert subslab vapors and generate a constant negative pressure beneath a building's slab foundation to prevent contaminated vapors from migrating up into the building. Vented VIMS rely on passive or active mechanisms (e.g., thermal gradients, wind driven ventilation, or powered fans) to dilute vapors beneath the building and vent them into the outdoor air.

MICHAEL MONTGOMERY, EXECUTIVE OFFICER

### **Updated Approach to VIMS**

In the 2014 VI Framework, the Regional Water Board expressed a preference for passive venting systems, which have fewer moving parts and potentially require less maintenance, and we typically did not require monitoring after occupancy. Since 2014, our concerns about long-term effectiveness of VIMS have increased due to awareness of failures and limited monitoring at buildings with VIMS. We now prefer SSDS for slab on grade design because they provide greater protection and allow for simpler monitoring.

In 2019, the Regional Water Board also updated our approach to VI assessment by providing more stringent soil gas and groundwater VI Environmental Screening Levels (ESLs) based on empirical attenuation factors rather than those determined using the Johnson and Ettinger VI model. We also updated the ESL guidance to recommend verification of VI model predictions and evaluation of the sewer/utility conduit air pathway. See the <u>ESL Webpage</u> for more information.

#### **Evaluating Effectiveness**

For vented VIMS, ongoing monitoring of contaminant concentrations (subslab and/or indoor air) is needed to demonstrate effectiveness. Long-term monitoring of indoor air can be problematic because it requires access permission, is intrusive to occupants, and data interpretation can be challenging due to confounding factors from indoor and outdoor sources of VOCs. For SSDS, the measurement of cross-slab vapor pressure differential can be used to monitor if subsurface vapors are migrating into the building. Pressure differential monitoring can provide real-time, continuous readings more cost effectively than indoor air monitoring. This reduces the need for long-term indoor air monitoring except as a contingency measure.

#### **Evaluating Operational Lifetime**

The Regional Water Board encourages active cleanup to reduce or eliminate the ongoing need for VIMS. Therefore, the operational lifetime of the VIMS is related to the cleanup timeframe and may be years to decades until the VI threat is abated. OM&M and Regional Water Board oversight are needed for the entire duration to ensure

protectiveness. The operational lifetime of the VIMS will depend on site-specific data on the VI threat. An estimate of the operational lifetime should be included in the VIMS plans. The operational lifetime of the VIMS should be reevaluated as part of long-term monitoring reports and 5-year reviews conducted under our oversight. Soil vapor monitoring near the source of pollution where the VIMS is installed provides the best evidence to evaluate the VI threat and evaluate when VIMS are no longer needed. VIMS operation can be discontinued when we determine that the VI threat has ceased.

## **Regional Water Board Oversight**

For cases under Regional Water Board oversight, we should be informed early in the development planning process of VI issues and the need for VIMS. When we concur that VIMS are necessary, we will typically need to review the documents summarized in Table 1, below. All documents should be prepared under the direction of an appropriately licensed professional. In addition, some documents will also require approval by local agencies including, but not limited to; the local building department, local environmental health agency, air quality agency, and local water agency. Local building departments routinely rely on regulatory oversight agency concurrence with milestone documents before granting building permits or approving occupancy.

Document Title	Milestone
VIMS Plan(s) – Including VIMS design, OM&M, contingency plans, and financial assurance.	Pre-construction
VIMS Construction Completion Report – Including as-built drawings	Post-construction and pre-occupancy
Long-Term Monitoring Reports	Ongoing post-construction
Five-Year Review Reports	Every five years post-construction

|--|

#### **Financial Assurance**

Financial assurance is typically required to ensure sufficient funds are available to operate, maintain, and monitor the VIMS, and pay regulatory oversight cost recovery for the anticipated operational lifetime of the VIMS. Prior to construction, a financial assurance mechanism should be created to fund costs associated with the VIMS (e.g., OM&M, reporting, potential contingency measures, Regional Water Board oversight). Financial assurance may be in the form of a trust fund, surety bond, letter of credit, insurance, corporate guarantee, qualification as a self-insurer by a financial means test, or other acceptable mechanism. A detailed cost estimate should be provided to quantify the amount of the financial assurance needed and should be based on the length of time that residual contamination may pose a vapor intrusion risk, up to 30 years.

#### **Expectations for Regulatory Review Timeframes**

For planning purposes, assume the Regional Water Board will need 60 days per submittal for review. Actual review times may vary depending on workload and project complexity (e.g., alternative designs, site complexity). Expectations for our oversight and review timeframes should be explicitly discussed with the site's case manager.

#### **Questions or Comments**

For general questions about our VIMS guidance, contact <u>ESLs.ESLs@waterboards.ca.gov</u>. For questions regarding a specific site, contact the Regional Water Board case manager. Contact information for the case manager can be accessed on the <u>GeoTracker</u> database (https://geotracker.waterboards.ca.gov/). To request oversight on a project, refer to the "Requesting Oversight" information and complete the new case application on our <u>Site Cleanup Webpage</u> (https://www.waterboards.ca.gov/sanfranciscobay/water\_issues/programs/sitecleanuppr ogram.html#RequestingOversight). Appendix H

**Service Letters** 

**Service Letters** 

AT & T



AT&T 100 W Alondra Bl Suite A-202 Gardena, CA 90248

July 02, 2019

AUSTIN J HUTCHERSON AMJ CONSTRUCTION MGMT INC 7474 N. Figueroa Street, Suite 250 Los Angeles, California 90041

Re: Will Serve Letter, Non-Interference Letter.

Dear Mr. Hutchison:

This letter is written to confirm that the proposed project 113, 119, 121 South Soto Street, Los Angeles, CA 90033, California is within the Base Rate Area of the AT&T California serving area in the Los Angeles 6 Exchange. AT&T expects to be in a position to provide telephone service to applicants in the above-referenced development upon request in accordance with requirements of, and at the rates and charges specified in, its Tariffs that are on file with the California Public Utilities Commission.

This offer to provide service will terminate 24 months after the date of this letter unless both of the following first occur:

- 1. you, in your capacity as the developer, enter into a written service agreement with AT&T; and,
- 2. you, in your capacity as developer, pay all charges you are required by AT&T's Tariffs to pay.

If you have any questions I can be contacted on 310-293-2261.

Sincerely,

Troy Stanard AT&T Engineering 310-293-2261 **Service Letters** 

**Charter Communications** 

### Will Serve Letter

7/3/2019

Jack Wichersham AMJ Construction Management, Inc. 7474 N Figueroa Street Ste. 250

Project Name:

316 East 1st Street, Los Angeles, CA, USA

2322 East 1st Street, Los Angeles, CA, USA

51 51

7113 South Soto Street, Los Angeles, CA, USA

119 South Soto Street, Los Angeles, CA, USA

E

BBO

121 South Soto Street, Los Angeles, CA, USA





Service Letters

Los Angeles Department of Water and Power (Electric)



POWER NEW BUSINESS DEVELOPMENT AND TECHNOLOGY APPLICATIONS DIVISION

ICE PLANNING & CUSTOMER

SUPPORT SUBSECTION

#### **METROPOLITAN EAST SERVICE PLANNING**

2633 Artesian Street, Suite 210, Los Angeles, CA 90031 (213) 367-6000 FAX: (213) 367-6027

Jeffrey T. Bergman District Engineer

WILL SERVE

July 3, 2019

Mr. Jack Wickersham AMJ Construction Management, Inc. 7474 North Figueroa St., Suite 250 Los Angeles, CA 90041

Dear Mr. Wickersham:

#### 2316, 2322 East 1<sup>St</sup> Street

This is in response to your email letter dated July 2, 2019 regarding electric service for the proposed project at the above address.

Electric service is available and will be provided in accordance with the Los Angeles Department of Water and Power Rules and Regulations. The estimated power requirement for this proposed project is part of the total load growth forecast for the City and has been taken into account in the planned growth of the power system.

If you have any questions regarding this matter, please call Mr. Jimmy He at (213) 367-6257.

Sincerely,

I Derg man/B

Jeffrey T. Bergman District Engineer, Metro East Service Planning

c: Jimmy He Bobby Fierro



ICE PLANNING & CUSTOMER SUPPORT SUBSECTION **METROPOLITAN EAST SERVICE PLANNING** 

2633 Artesian Street, Suite 210, Los Angeles, CA 90031 (213) 367-6000 FAX: (213) 367-6027

Jeffrey T. Bergman District Engineer

# WILL SERVE

July 3, 2019

Mr. Jack Wickersham AMJ Construction Management, Inc. 7474 North Figueroa St., Suite 250 Los Angeles, CA 90041

Dear Mr. Wickersham:

#### 113, 119, 121 South Soto Street

This is in response to your email letter dated July 2, 2019 regarding electric service for the proposed project at the above address.

Electric service is available and will be provided in accordance with the Los Angeles Department of Water and Power Rules and Regulations. The estimated power requirement for this proposed project is part of the total load growth forecast for the City and has been taken into account in the planned growth of the power system.

If you have any questions regarding this matter, please call Mr. Jimmy He at (213) 367-6257.

Sincerely,

Bergmen/RR

Jeffrey T. Bergman District Engineer, Metro East Service Planning

c: Jimmy He Bobby Fierro Service Letters

City of Los Angeles Bureau of Engineering

BOARD OF PUBLIC WORKS MEMBERS **KEVIN JAMES** PRESIDENT

> **CECILIA CABELLO** VICE PRESIDENT

DR. MICHAEL R. DAVIS PRESIDENT PRO TEMPORE **AURA GARCIA** 

COMMISSIONER JESSICA CALOZA

COMMISSIONER **DR. FERNANDO CAMPOS** 

EXECUTIVE OFFICER



CALIFORNIA



07/09/2019

#### **AMJ CONSTRUCTION MANAGEMENT, INC** 7474 N FIGUEROA STREET, SUITE 250 LOS ANGELES, CA, 90041

Dear AMJ Construction Management, Inc.

#### SEWER AVAILABILITY: 113 SOUTH SOTO STREET

The Bureau of Sanitation has reviewed your request of 07/09/2019 for sewer availability at 113 **SOUTH SOTO STREET.** Based on their analysis, it has been determined on 07/09/2019 that there is capacity available to handle the anticipated discharge from your proposed project(s) as indicated in the attached copy of the Sewer Capacity Availability Request (SCAR).

This determination is valid for 180 days from the date shown on the Sewer Capacity Availability request (SCAR) approved by the Bureau of Sanitation.

While there is hydraulic capacity available in the local sewer system at this time, availability of sewer treatment capacity will be determined at the Bureau of Engineering Public Counter upon presentation of this letter. A Sewer Connection Permit may also be obtained at the same counter provided treatment capacity is available at the time of application.

A Sewerage Facilities Charge is due on all new buildings constructed within the City. The amount of this charge will be determined when application is made for your building permit and the Bureau of Engineering has the opportunity to review the building plans. To facilitate this determination a preliminary set of plans should be submitted to Bureau of Engineering District Office, Public Counter.

Provision for a clean out structure and/or a sewer trap satisfactory to the Department of Building and Safety may be required as part of the sewer connection permit.

Sincerely,

Karan Patel CE ASSOCIATE Central District, Bureau of Engineering

**BUREAU OF** ENGINEERING

GARY LEE MOORE. PE. ENV SP CITY ENGINEER

1149 S BROADWAY, SUITE 700 LOS ANGELES, CA 90015-2213

http://eng.lacity.org

#### City of Los Angeles Bureau of Engineering

#### SEWER CAPACITY AVAILABILITY REVIEW FEE (SCARF) - Frequently Asked Questions

SCAR stands for Sewer Capacity Availability Review that is performed by the Department of Public Works, Bureau of Sanitation. This review evaluates the existing sewer system to determine if there is adequate capacity to safely convey sewage from proposed development projects, proposed construction projects, proposed groundwater dewatering projects and proposed increases of sewage from existing facilities. The SCAR Fee (SCARF) recovers the cost, incurred by the City, in performing the review for any SCAR request that is expected to generate 10,000 gallons per day (gpd) of sewage.

The SCARF is based on the effort required to perform data collection and engineering analysis in completing a SCAR. A brief summary of that effort includes, but is not limited to, the following:

- 1. Research and trace sewer flow levels upstream and downstream of the point of connection.
- 2. Conduct field surveys to observe and record flow levels. Coordinate with maintenance staff to inspect sewer maintenance holes and conduct smoke and dye testing if necessary.
- 3. Review recent gauging data and in some cases closed circuit TV inspection (CCTV) videos.
- 4. Perform gauging and CCTV inspection if recent data is not available.
- 5. Research the project location area for other recently approved SCARs to evaluate the cumulated impact of all known SCARs on the sewer system.
- 6. Calculate the impact of the proposed additional sewage discharge on the existing sewer system as it will be impacted from the approved SCARs from Item 6 above. This includes tracing the cumulative impacts of all known SCARs, along with the subject SCAR, downstream to insure sufficient capacity exist throughout the system.
- 7. Correspond with the applicant for additional information and project and clarification as necessary.
- 8. Work with the applicant to find alternative sewer connection points and solutions if sufficient capacity does not exist at the desired point of connection.

#### **Questions and Answers:**

1. When is the SCARF applied, or charged?

It applies to all applicants seeking a Sewer Capacity Availability Review (SCAR). SCARs are generally required for Sewer Facility Certificate applications exceeding 10,000 gpd, or request from a property owner seeking to increase their discharge thru their existing connection by 10,000 gpd or more, or any groundwater related project that discharges 10,000 gpd or more, or any proposed or future development for a project that could result in a discharge of 10,000 gpd.

#### 2. Why is the SCARF being charged now when it has not been in the past?

The City has seen a dramatic increase in the number of SCARs over 10,000 gpd in the last few years and has needed to increase its resources, i.e., staff and gauging efforts, to respond to them. The funds collected thru SCARF will help the City pay for these additional resources and will be paid by developers and property owners that receive the benefit from the SCAR effort.

#### 3. Where does the SCARF get paid?

The Department of Public Works, Bureau of Engineering (BOE) collects the fee at its public counters. Once the fee is paid then BOE prepares a SCAR request and forwards it to the BOS where it is reviewed and then returned to BOE. BOE then informs the applicant of the result. In some cases, BOS works directly with the applicant during the review of the SCAR to seek additional information and work out alternative solutions Service Letters

Los Angeles Department of Water and Power (Water)

#### Eric Garcetti, Mayor

Jill Banks Barad Christina E. Noonan

Susana Reyes

Board of Commissioners Mel Levine, President

Cynthia McClain-Hill, Vice President

LA Los Angeles Department of Water & Power

CUSTOMERS FIRST

July 10, 2019

Map No. 128-222

Mr. Jack Wickersham AMJ Construction Management, Inc. 7474 North Figueroa Street, Suite 250 Los Angeles, California 90041

Dear Mr. Wickersham:

#### Subject: Water Availability - Will Serve

113, 119, 121 South Soto Street and 2316, 2322 East 1<sup>st</sup> Street Stevenson's Subdivision of a Part of Lot 6, Block 60, Hancock Survey APN Nos: 5183-009-904, -905, -906, -907, -910, Block 2, Lots 8, 9, 11-13

This is in reply to your request regarding water availability for the above-mentioned location. This property can be supplied with water from the municipal system subject to the Water System's rules of the Los Angeles Department of Water and Power (LADWP). It is also subject to all conditions set by LADWP.

Should you require additional information, please contact Amy Kurakusu at (213) 367-4908. Correspondence may be addressed to:

LADWP Water Business Arrangements Attention: Amy Kurakusu P.O. Box 51111, Room 1425 Los Angeles, California 90051-5700

Sincerely,

Liz Gonzalez Manager - Business Arrangements Water Distribution Engineering

AK:md c: Amy Kurakusu Susan A. Rodriguez, Secretary David H. Wright, General Manager Service Letters

Southern California Gas Company

701 N. Bullis Rd. Compton, CA 90224-9099



July 16, 2019

AMJ Construction Management, Inc. 7474 N Figueroa St, Suite 250 Los Angeles, CA 90041 Attn: Jack Wickersham

#### Subject: Will Serve - 119, 121, 113 South Soto Street, Los Angeles, CA 90033 2316, 2322 East 1st Street, Los Angeles, CA 90033

Thank you for inquiring about the availability of natural gas service for your project. We are pleased to inform you that Southern California Gas Company (SoCalGas) has facilities in the area where the above named project is being proposed. The service would be in accordance with SoCalGas' policies and extension rules on file with the California Public Utilities Commission (CPUC) at the time contractual arrangements are made.

This letter should not be considered a contractual commitment to serve the proposed project, and is only provided for informational purposes only. The availability of natural gas service is based upon natural gas supply conditions and is subject to changes in law or regulation. As a public utility, SoCalGas is under the jurisdiction of the Commission and certain federal regulatory agencies, and gas service will be provided in accordance with the rules and regulations in effect at the time service is provided. Natural gas service is also subject to environmental regulations, which could affect the construction of a main or service line extension (for example, if hazardous wastes were encountered in the process of installing the line). Applicable regulations will be determined once a contract with SoCalGas is executed.

If you need assistance choosing the appropriate gas equipment for your project, or would like to discuss the most effective applications of energy efficiency techniques, please contact our area Service Center at 800-427-2200.

Thank you again for choosing clean, reliable, and safe natural gas, your best energy value.

Sincerely,

Oscar Mariscal

Oscar Mariscal Pipeline Planning Assistant SoCalGas-Compton HQ


701 N. Bullis Rd. Compton, CA 90224-9099

July 16, 2019

AMJ Construction Management, Inc. 7474 N Figueroa St, Suite 250 Los Angeles, CA 90041 Attn: Jack Wickersham

## Subject: Maps - 119, 121, 113 South Soto Street, Los Angeles, CA 90033 2316, 2322 East 1st Street, Los Angeles, CA 90033

Enclosed is the information you requested relating to the location of gas facilities within the area of your project. The information we have provided was obtained from a search of all our available records and are approximate in nature. Due to numerous factors, the depths of our facilities vary and should not be taken for granted. If exact depth location and information is required at points of possible interference, it will be necessary to physically check the facility in question.

It is extremely important that you furnish us with **"signed"** final plans and subsequent plan revisions as soon as they are available. A minimum of twelve (12) weeks is needed to analyze your plans and to design required alterations due to any conflicting facilities. Depending on the magnitude of the work involved, additional time may then be required to clear the conflict. Please keep us informed of construction schedules, preconstruction meetings, etc., so that our work can be scheduled accordingly.

Upon request, at least two (2) working days prior to the start of construction, we will locate and mark our active underground facilities for the contractor at no cost. Please call Underground Service Alert (USA) at (800) 422-4133.

You will also have to contact our Transmission Department regarding the above-mentioned request. CPUC Regulations require notification of both SoCal Gas Distribution and Transmission of all work being conducted. Please contact SoCal Gas Transmission, at 9400 Oakdale Avenue, Chatsworth, CA 91313, socalgastransmissionutilityrequest@semprautilities.com. They will need a notification letter and plans.

If you have any questions or require additional information please contact me at (310) 687-2011

Sincerely,

Oscar Mariscal

Oscar Mariscal Pipeline Planning Assistant SoCalGas-Compton HQ



Appendix I

Native American Heritage Commission Sacred Lands File

NATIVE AMERICAN HERITAGE COMMISSION Cultural and Environmental Department 1550 Harbor Blvd., Suite 100 West Sacramento, CA 95691 Phone: (916) 373-3710 Email: <u>nahc@nahc.ca.gov</u> Website: <u>http://www.nahc.ca.gov</u> Twitter: @CA\_NAHC



June 28, 2019

Holly Galbreath Pomeroy Environmental Services

VIA Email to: brett@pomeroyes.com

RE: Los Lirios Mixed-Use Project, Los Angeles County

Dear Ms. Galbreath:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were <u>positive</u>. Please contact the Gabrieleno Band of Mission Indians – Kizh Nation on the attached list for more information. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our lists contain current information. If you have any questions or need additional information, please contact me at my email address: steven.quinn@nahc.ca.gov.

Sincerely,

ten Quin

Steven Quinn Associate Governmental Program Analyst

Attachment

#### Native American Heritage Commission Native American Contact List Los Angeles County 6/28/2019

#### Gabrieleno Band of Mission Indians - Kizh Nation

Andrew Salas, Chairperson P.O. Box 393 Gabrieleno Covina, CA, 91723 Phone: (626) 926 - 4131 admin@gabrielenoindians.org

## Gabrieleno/Tongva San Gabriel

Band of Mission IndiansAnthony Morales, ChairpersonP.O. Box 693GabrielenoSan Gabriel, CA, 91778Phone: (626) 483 - 3564Fax: (626) 286-1262GTTribalcouncil@aol.com

#### Gabrielino /Tongva Nation

Sandonne Goad, Chairperson 106 1/2 Judge John Aiso St., Gabrielino #231 Los Angeles, CA, 90012 Phone: (951) 807 - 0479 sgoad@gabrielino-tongva.com

#### Gabrielino Tongva Indians of

California Tribal CouncilRobert Dorame, ChairpersonP.O. Box 490GabrielinoBellflower, CA, 90707Phone: (562) 761 - 6417Fax: (562) 761-6417gtongva@gmail.com

#### Gabrielino-Tongva Tribe

Charles Alvarez, 23454 Vanowen Street West Hills, CA, 91307 Phone: (310) 403 - 6048 roadkingcharles@aol.com

Gabrielino

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Los Lirios Mixed-Use Project, Los Angeles County.

Appendix J

Supplemental VMT Analysis



## MEMORANDUM

To:	Wes Pringle Da Da Da Da Da Da Da Da Da Da Da Da Da	March 20, 2020
From:	Clare M. Look-Jaeger, P.E. Color of the Chin S. Taing Linscott, Law & Greenspan, Engineers	G Ref: 1-19-4288-1
Subject:	Los Lirios Mixed-Use Project – Supplementa	nl VMT Analysis

Linscott, Law & Greenspan, Engineers (LLG) has prepared this memorandum to summarize the supplemental review conducted for the proposed Los Lirios Mixed-Use project ("proposed project" herein). As you are aware, LLG previously prepared the transportation impact study dated July 30, 2018, and the subsequent addendum analysis dated June 11, 2019, for the proposed project. The subject studies were reviewed and accepted by the Los Angeles Department of Transportation (LADOT) as evidenced by the issuance of its interdepartmental clearance letter dated June 20, 2019. This supplemental Vehicle Miles Traveled (VMT) analysis is being submitted since at the time the City Council adopted the new VMT based thresholds (i.e., on July 30, 2019), LADOT had already issued its clearance letter. Therefore, this analysis employs the current version of LADOT's VMT calculator (Version 1.2) and the results are for informational purposes.

The Los Angeles Department of City Planning (LADCP) and LADOT updated the Transportation Section of the City's California Environmental Quality Act (CEQA) Thresholds Guide to comply with and implement Senate Bill (SB) 743. On September 27, 2013, Governor Brown signed SB 743. Under SB 743, the focus of transportation analysis pursuant to CEQA will shift from driver delay, or level of service (LOS), to reduction of vehicle miles traveled, reduction in greenhouse gas emissions, creation of multimodal networks and promotion of mixed-use developments. In December 2018, the California Natural Resources Agency certified and adopted amendments to the CEQA Guidelines implementing SB 743 with a target implementation date of July 1, 2020. City staff presented the CEQA Appendix G environmental checklist update to the City Council, which led to the adoption of new VMT-based significance thresholds and its subsequent incorporation into the City's CEOA Threshold Guide. In the course of this update, LADOT has developed a VMT Calculator tool to estimate project-specific daily household VMT per capita and daily work VMT per employee for land use development projects. This tool is intended to be used for development projects within the City of Los Angeles, and the VMT methodology is tailored to the proposed City of Los Angeles Transportation Assessment Guidelines (TAG).<sup>1</sup>

Engineers & Planners Traffic Transportation Parking

Linscott, Law & Greenspan, Engineers

600 S. Lake Avenue Suite 500 Pasadena, CA 91106

626.796.2322 т 626.792.0941 ғ www.llgengineers.com

Pasadena Irvine San Diego Woodland Hills

<sup>&</sup>lt;sup>1</sup> City of Los Angeles *Transportation Assessment Guidelines*, Chapter 2, CEQA Analysis of Transportation Impacts, July 2019.

Wes Pringle March 20, 2020 Page 2

This voluntary VMT analysis has been conducted to identify and evaluate the potential impacts of the proposed project based on the VMT methodology set forth in the City's *Transportation Assessment Guidelines*. As stated above, the VMT analysis is supplemental since the project application was filed and the MOU with LADOT was executed prior to adoption of the new guidelines, and thus does not apply to the proposed project. As noted previously, LADOT also had already issued its clearance letter prior to adoption of the new TAG.

According to the City's *Transportation Assessment Guidelines*, a development project's daily vehicle trips should be estimated using the City's VMT Calculator. The proposed project, which includes both residential (multi-family units and affordable housing [family-type] units) and commercial (office and retail) uses, would have a potential impact if it meets the following:

- "For residential projects, the project would generate household VMT per capita exceeding 15% below the existing average household VMT per capita for the Area Planning Commission (APC) area in which the project is located."
- "For office projects, the project would generate work VMT per employee exceeding 15% below the existing average work VMT per employee for the Area Planning Commission (APC) area in which the project is located."

The project's estimated household VMT per capita and work VMT per employee are compared to the average household VMT per capita and work VMT per employee for the corresponding APC. Different VMT significance thresholds have been established for each APC boundary area as the characteristics of each are distinct in terms of land use, density, transit availability, employment, etc. The City of Los Angeles significance thresholds (i.e., provided on a daily household VMT per capita basis and a daily work VMT per employee basis) for each of the seven (7) APC boundary areas are presented in *Table A*. As the project is located in the East Los Angeles APC, the VMT impact criteria (i.e., 15% below APC average) applicable to the proposed project is 7.2 daily household VMT per capita and 12.7 daily work VMT per employee.

Based on the City's VMT Calculator, the estimated household VMT per capita for the project is 5.4 household VMT per capita and the work VMT per employee is not applicable based on the City's TAG and VMT Calculator. It is noted that other than accounting for the proposed project providing on-site bicycle parking pursuant to City Code requirements, no transportation demand management measures, trip reduction strategies, or project design features have been included in the estimation of the project's VMT:

Wes Pringle March 20, 2020 Page 3

Based on the City's threshold criteria provided in *Table A*, the proposed project is not forecast to result in a significant household VMT per capita or work VMT per employee impact. Copies of the detailed City of Los Angeles VMT Calculator worksheets for the proposed project are attached.

Please feel free to call us at 626.796.2322 with any questions or comments regarding the supplemental VMT analysis prepared for the proposed Los Lirios Mixed-Use project.

c: File

 Table A

 CITY OF LOS ANGELES VMT IMPACT CRITERIA [1]

	15 PERCENT (15%) BELOW APC CRITERIA [2]					
AREA PLANNING COMMISSION	DAILY HOUSEHOLD VMT PER CAPITA	DAILY WORK VMT PER EMPLOYEE				
Central	6.0	7.6				
East Los Angeles	7.2	12.7				
Harbor	9.2	12.3				
North Valley	9.2	15.0				
South Los Angeles	6.0	11.6				
South Valley	9.4	11.6				
West Los Angeles	7.4	11.1				

[1] Source: City of Los Angeles Draft Transportation Assessment Guidelines, July 2019.

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## **CITY OF LOS ANGELES**

#### INTER-DEPARTMENTAL CORRESPONDENCE

119 S Soto St DOT Case No. CEN17-46417

Date: June 20, 2019

- To: Heather Bleemers, Senior City Planner Department of City Planning
- From: Wes Pringle, Transportation Engineer Department of Transportation

Subject: ADDENDUM TO THE TRANSPORTATION IMPACT ANALYSIS FOR THE PROPOSED LOS LIRIOS MIXED-USE PROJECT AT 113, 119, AND 121 SOUTH SOTO STREET (ENV-2018-3692-EAF)

On October 2, 2018, the Department of Transportation (DOT) issued a transportation assessment report to the Department of City Planning for the proposed Los Lirios Mixed-Use project (**Attachment A**) based on the July 30, 2018 transportation impact analysis prepared by Linscott, Law & Greenspan, engineers. However, since the report was released, the project has been revised and a June 11, 2019 addendum to the transportation analysis was prepared by Linscott, Law & Greenspan, engineers.

The original project was located on two sites: 113-121 South Soto Street (Site A) and 2316-2400 East 1st Street (Site B). At the time the transportation analysis was prepared, the uses of Site B were undetermined and it was noted in the transportation analysis and in the DOT assessment report that a separate transportation analysis would be required subsequently when the Site B uses were determined. The revised project no longer includes Site B and only consists of 113-121 South Soto Street as illustrated in **Attachment B**, and the project uses have been slightly modified:

Land Use	Original Project	Revised Project
Apartments	66 units	64 units
Community Room	1,490 square feet (sf)	1,650 sf
Commercial	5,000 sf	4,300 sf

The previous traffic analysis determined that none of the five analyzed intersections would be significantly impacted by project related traffic. Since the revised project is slightly smaller than the original project, the revised project is not expected to result in any significant impacts. DOT concurs with the addendum that the project's expected impacts would be less than significant and no changes to the transportation analysis are required. All of the project requirements that are identified in DOT's October 2, 2018 letter (**Attachment A**) shall remain in effect.

If you have any questions, please contact Eileen Hunt of my staff at (213) 972-8481.

Attachments

*K*:\Letters\2019\CEN17-46417\_119 Soto St MU\_rev\_ltr.docx

c: Shawn Kuk & Mark Jones, Council District 14 Matthew Masuda, Central District, BOE Mehrdad Moshksar, Central District, DOT Taimour Tanavoli, Case Management, DOT Chin S. Tiang, LLG engineers

## **CITY OF LOS ANGELES**

ATTACHMENT A

#### INTER-DEPARTMENTAL CORRESPONDENCE

119 S Soto St DOT Case No. CEN 18-46417

Date: October 2, 2018

To: Heather Bleemers, Senior City Planner Department of City Planning

From: Wes Pringle, Transportation Engineer Department of Transportation

Subject: TRANSPORTATION IMPACT ANALYSIS FOR THE PROPOSED LOS LIRIOS MIXED-USE PROJECT AT 113, 119, AND 121 SOUTH SOTO STREET AND 2316, 2322, AND 2400 EAST 1<sup>ST</sup> STREET (ENV-2018-3692-EAF)

The Department of Transportation (DOT) has reviewed the transportation analysis prepared by Linscott, Law & Greenspan, Engineers, dated July 30, 2018, for the proposed Los Lirios Mixed-Use project located on two sites: 113-121 South Soto Street and 2316-2400 East 1<sup>st</sup> Street. In order to evaluate the effects of the project's traffic on the available transportation infrastructure, the significance of the project's traffic impacts is measured in terms of change to the volume-tocapacity (V/C) ratio between the "future no project" and the "future with project" scenarios. This change in the V/C ratio is compared to established threshold standards to assess the project-related traffic impacts. Based on DOT's traffic impact criteria<sup>1</sup>, the transportation study included the analysis of five intersections and determined that none of the study intersections would be significantly impacted by project-related traffic. The results of the traffic analysis, which accounted for other known development projects in estimating potential cumulative impacts and adequately evaluated the project's transportation impacts on the surrounding community, are summarized in **Attachment 1**.

#### **DISCUSSION AND FINDINGS**

#### A. <u>Project Description</u>

The project, in partnership with the Los Angeles County Metropolitan Transportation Authority (Metro), proposes to construct the Los Lirios Mixed-Use project on two sites with affordable housing apartments and ground floor local community serving retail/restaurant land use components in Boyle Heights as illustrated in **Attachment 2a**. Site A south of the Metro Soto Station is currently vacant and will include 66 affordable housing units, a 1,490 square-foot community room, office space, computer/conference room, laundry room, and up to 5,000 square feet of retail/restaurant uses fronting Soto Street. Site B at 2316-2400 East 1<sup>st</sup> Street is currently occupied by the historic Peabody Werden Duplex and will primarily consist of the restoration and rehabilitation of the Peabody Werden Duplex. Additional uses of Site B have not yet been determined, and, as such, additional traffic analyses may be required. The subterranean parking on Site A will be accessed via the existing alleyway south of 1<sup>st</sup> Street on the southwest side of Site A as illustrated in

<sup>&</sup>lt;sup>1</sup> Per DOT's Traffic Study Policies and Procedures, a significant impact is identified as an increase in the Critical Movement Analysis (CMA) value, due to project related traffic, of 0.01 or more when the final ("with project") Level of Service (LOS) is LOS E or F; an increase of 0.020 or more when the final LOS is LOS D; or an increase of 0.040 or more when the final LOS is LOS C.

#### Attachment 2b. The project is expected to be completed by 2021.

#### B. <u>Trip Generation</u>

The project is estimated to generate an approximate net increase of 496 daily trips, a net increase of 48 trips during the a.m. peak hour and a net increase of 41 trips during the p.m. peak hour. The trip generation estimates are based on formulas published by the Institute of Transportation Engineers (ITE) <u>Trip Generation</u>, 10<sup>th</sup> Edition, 2017 and the LADOT Transportation Impact Study Guidelines, December 2016, Table 5: Trip Generation Rates for Affordable Housing Projects. A copy of the project trip generation table can be found in **Attachment 3**.

### C. <u>Freeway Analysis</u>

To comply with the Freeway Analysis Agreement executed between Caltrans and DOT in October 2013, a screening analysis is necessary to determine if additional evaluation of freeway mainline and ramp segments is necessary beyond the State-mandated Congestion Management Program (CMP) requirements. Exceeding one of the four screening criteria would require the applicant to work directly with Caltrans to prepare more detailed freeway analyses. However, the project does not meet or exceed any of the four thresholds defined in the agreement; therefore, no additional freeway analysis was required.

## D. <u>Construction Impacts</u>

DOT recommends that a construction work site traffic control plan be submitted to DOT's Citywide Temporary Traffic Control Section or Permit Plan Review Section for review and approval prior to the start of any construction work. Refer to <a href="http://ladot.lacity.org/what-we-do/plan-review">http://ladot.lacity.org/what-we-do/plan-review</a> to determine which section to coordinate review of the work site traffic control plan. The plan should show the location of any roadway or sidewalk closures, traffic detours, haul routes, hours of operation, protective devices, warning signs and access to abutting properties. DOT also recommends that all construction related truck traffic be restricted to off-peak hours to the extent feasible.

#### **PROJECT REQUIREMENTS**

## A. <u>Highway Dedication and Street Widening Requirements</u>

On January 20, 2016, the City Council adopted the Mobility Plan 2035 which represents the new Mobility Element of the General Plan. A key feature of the updated plan is to revise street standards in an effort to provide a more enhanced balance between traffic flow and other important street functions including transit routes and stops, pedestrian environments, bicycle routes, building design and site access, etc. Per the new Mobility Element, **Soto Street and 1<sup>st</sup> Street**, both Avenue IIs, would require a 28-foot half-width roadway within a 43-foot half-width right-of-way, and the alley adjacent to Site A would require a 10-foot half-width right-of-way. The applicant should check with BOE's Land Development Group to determine if there are any other applicable highway dedication, street widening and/or sidewalk requirements for this project.

#### B. <u>Parking Requirements</u>

The transportation analysis did not indicate the number of vehicle parking spaces the project will provide. The project will provide 70 long-term and 10 short-term bicycle parking spaces. The applicant should check with the Department of Building and Safety on the

number of Code-required parking spaces needed for the project.

C. Driveway Access and Circulation

The conceptual site plan for the project (see **Attachment 2b**) is acceptable to DOT. However, the review of this study does not constitute approval of the dimensions for any new proposed driveways. This requires separate review and approval and should be coordinated with DOT's Citywide Planning Coordination Section (201 North Figueroa Street, 5th Floor, Room 550, at 213-482-7024). In order to minimize and prevent last minute building design changes, the applicant should contact DOT for driveway width and internal circulation requirements prior to the commencement of building or parking layout design.

D. <u>Development Review Fees</u>

An ordinance adding Section 19.15 to the Los Angeles Municipal Code relative to application fees paid to DOT for permit issuance activities was adopted by the Los Angeles City Council in 2009 and updated in 2014. Ordinance No. 183270 identifies specific fees for traffic study review, condition clearance, and permit issuance. The applicant shall comply with any applicable fees per this ordinance.

If you have any questions, please contact Eileen Hunt of my staff at (213) 972-8481.

#### Attachments

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c: Kevin Ocubillo, Council District No. 14 Mehrdad Moshksar, Central District Office, DOT Bert Moklebust, Central District, BOE Taimour Tanavoli, Case Management Office, DOT Chin S. Taing, Linscott, Law & Greenspan, Engineers

#### Table 9-1 SUMMARY OF VOLUME TO CAPACITY RATIOS AND LEVELS OF SERVICE WEEKDAY AM AND PM PEAK HOURS

			[1	]			[2]		[3	]			[4]	
					YEAR	2018			YEAR	2021	YEAR	2021		
			YEAR	2018	EXISTING	G WITH	CHANGE	SIGNIF.	FUTUR	E W/O	FUTURE	WITH	CHANGE	SIGNIF.
		PEAK	EXIST	TING	PROJI	ECT	V/C	IMPACT	PROJ	ECT	PROJ	ЕСТ	V/C	IMPACT
NO.	INTERSECTION	HOUR	V/C	LOS	V/C	LOS	[(2)-(1)]	[a]	V/C	LOS	V/C	LOS	[(4)-(3)]	[a]
1	Breed Street/ 1st Street	AM PM	0.573 0.454	A A	0.581 0.464	A A	0.008 0.010	No No	0.695 0.631	B B	0.703 0.641	C B	0.008 0.010	No No
2	Soto Street/ Cesar E. Chavez Avenue	AM PM	0.617 0.567	B A	0.620 0.568	B A	0.003 0.001	No No	0.749 0.688	C B	0.752 0.690	C B	0.003 0.002	No No
3	Soto Street/ 1st Street	AM PM	0.724 0.687	C B	0.737 0.701	C C	0.013 0.014	No No	0.847 0.912	D E	0.860 0.917	D E	0.013 0.005	No No
4	Soto Street/ 4th Street	AM PM	0.621 0.616	B B	0.623 0.616	B B	0.002 0.000	No No	0.838 0.850	D D	0.841 0.850	D D	0.003 0.000	No No
5	Mott Street/ 1st Street	AM PM	0.619 0.529	B A	0.625 0.532	B A	0.006 0.003	No No	0.719 0.645	C B	0.726 0.649	C B	0.007 0.004	No No

[a] According to LADOT's "Transportation Impact Study Guidelines," December 2016, a transportation impact on an intersection shall be deemed significant in accordance with the following table:

Final v/c	LOS	Project Related Increase in v/c
>0.701 - 0.800	С	equal to or greater than 0.040
>0.801 - 0.900	D	equal to or greater than 0.020
>0.901	E/F	equal to or greater than 0.010

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ATTACHMENT 2a CEN18-<u>46417 119 S Soto St</u>



-6-

## ATTACHMENT 2b CEN18-4<u>6417 119 S Soto St</u>



-8-

### Table 7-1 PROJECT TRIP GENERATION [1]

		DAILY	AM PEAK HOUR		PM PEAK HOUR			
		TRIP ENDS [2]	V	OLUMES	[2]	VOLUMES [2]		[2]
LAND USE	SIZE	VOLUMES	IN	OUT	TOTAL	IN	OUT	TOTAL
Proposed Uses								
Apartment [3]	66 DU	270	13	20	33	12	10	22
Less Transit Adjustment (15%) [4]		(41)	(2)	(3)	(5)	(2)	(2)	(4)
Community Room [5]	1,490 GSF	43	2	1	3	1	2	3
Less Transit Adjustment (15%) [4]		(6)	nom.	nom.	nom.	nom.	nom.	nom.
Retail [6]	2,500 GLSF	94	1	1	2	5	5	10
Less Pass-by Adjustment (50%) [7]		(47)	(1)	(1)	(2)	(3)	(3)	(6)
Less Transit Adjustment (15%) [4]		(7)	nom.	nom.	nom.	nom.	nom.	nom.
High-Turnover (Sit-Down) Restaurant [8]	2,500 GSF	280	14	11	25	15	9	24
Less Pass-by Adjustment (20%) [7]		(56)	(3)	(2)	(5)	(3)	(2)	(5)
Less Transit Adjustment (15%) [4]		(34)	(2)	(1)	(3)	(2)	(1)	(3)
NET TOTAL PROJECT TRIPS		496	22	26	48	23	18	41

[1] Source: ITE "Trip Generation Manual", 10th Edition, 2017.

[2] Trips are one-way traffic movements, entering or leaving.

- [3] Affordable housing (family) trip generation average rates based on vehicle trip count data collected at affordable housing sites in the City of Los Angeles in 2016 as provided in the *Transportation Impact Study Guidelines*, December 2016.
  - Daily Trip Rate: 4.08 trips/dwelling unit; 50% inbound/50% outbound
  - AM Peak Hour Trip Rate: 0.50 trips/dwelling unit; 40% inbound/60% outbound
  - PM Peak Hour Trip Rate: 0.34 trips/dwelling unit; 55% inbound/45% outbound
- [4] A transit adjustment of 15 percent was applied to all the land use components due to the proximity to the Metro Gold Line Soto station located at 2330 E. 1st Street. The transit adjustments were applied after the pass-by adjustments were applied.
- [5] ITE Land Use Code 495 (Recreational Community Room) trip generation average rates.
  - Daily Trip Rate: 28.82 trips/1,000 SF of floor area; 50% inbound/50% outbound
  - AM Peak Hour Trip Rate: 1.76 trips/1,000 SF of floor area; 66% inbound/34% outbound
  - PM Peak Hour Trip Rate: 2.31 trips/1,000 SF of floor area; 47% inbound/53% outbound

[6] ITE Land Use Code 820 (Shopping Center) trip generation average rates.

- Daily Trip Rate: 37.75 trips/1,000 SF of leasable floor area; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.94 trips/1,000 SF of leasable floor area; 62% inbound/38% outbound

- PM Peak Hour Trip Rate: 3.81 trips/1,000 SF of leasable floor area; 48% inbound/52% outbound

- [7] Pass-by trips are made as intermediate stops on the way from an origin to a primary destination without a route diversion. Pass-by trips are attracted from the traffic passing the site on an adjacent street or roadway that offers direct access to the site. The pass-by adjustment factors of 50 percent and 20 percent were applied to the retail and restaurant land use components, respectively, pursuant to the *Transportation Impact Study Guidelines*, December 2016.
- [8] ITE Land Use Code 932 (High-Turnover [Sit-Down] Restaurant) trip generation average rates.
  - Daily Trip Rate: 112.18 trips/1,000 SF of floor area; 50% inbound/50% outbound
  - AM Peak Hour Trip Rate: 9.94 trips/1,000 SF of floor area; 55% inbound/45% outbound
  - PM Peak Hour Trip Rate: 9.77 trips/1,000 SF of floor area; 62% inbound/38% outbound

# Table 7-1 PROJECT TRIP GENERATION [1]

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Community Room [5]	1,490 GSF	43	2	1	3	1	2	3
Less Transit Adjustment (15%) [4]		(6)	nom.	nom.	nom.	nom.	nom.	nom.
Retail [6]	2,500 GLSF	94	1	1	2	5	5	10
Less Pass-by Adjustment (50%) [7]		(47)	(1)	(1)	(2)	(3)	(3)	(6)
Less Transit Adjustment (15%) [4]		(7)	nom.	nom.	nom.	nom.	nom.	nom.
High-Turnover (Sit-Down) Restaurant [8]	2,500 GSF	280	14	11	25	15	9	24
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NET TOTAL PROJECT TRIPS		496	22	26	48	23	18	41

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- [7] Pass-by trips are made as intermediate stops on the way from an origin to a primary destination without a route diversion. Pass-by trips are attracted from the traffic passing the site on an adjacent street or roadway that offers direct access to the site. The pass-by adjustment factors of 50 percent and 20 percent were applied to the retail and restaurant land use components, respectively, pursuant to the *Transportation Impact Study Guidelines*, December 2016.
- [8] ITE Land Use Code 932 (High-Turnover [Sit-Down] Restaurant) trip generation average rates.
  - Daily Trip Rate: 112.18 trips/1,000 SF of floor area; 50% inbound/50% outbound
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  - PM Peak Hour Trip Rate: 9.77 trips/1,000 SF of floor area; 62% inbound/38% outbound

# **ATTACHMENT B**



# **CITY OF LOS ANGELES VMT CALCULATOR Version 1.2**



# *Project Screening Criteria: Is this project required to conduct a vehicle miles traveled analysis?*



located within one-half mile of a fixed-rail or fixed-guideway transit station?



# **Tier 1 Screening Criteria** Project will have less residential units compared to existing residential units & is within one-half mile of a fixed-rail station. **Tier 2 Screening Criteria** 424 ٠ The net increase in daily trips < 250 trips Daily Trips 2,757 The net increase in daily VMT $\leq 0$ Net Daily VMT The proposed project consists of only retail 4.300 land uses ≤ 50,000 square feet total. The proposed project is required to perform VMT analysis.



# **Project Screening Summary**

# **CITY OF LOS ANGELES VMT CALCULATOR Version 1.2**





#### •

Max Home Based TDM / Max Work Based TDM /	Achieved? Achieved?	No No	No No
	Parkir	ig	
	Trans	it	
Edu	cation & Enc	ouragement	
Co	mmute Trip	Reductions	
	Shared Mo	obility	
	Bicycle Infras	structure	
Implement/Improve On-street Bicycle Facility Proposed Prj Mitigation	Select Proposed P	rj or Mitigation to incl	ude this strategy
Include Bike Parking Per LAMC Proposed Prj Mitigation	Select Proposed P	rj or Mitigation to incl	ude this strategy
Include Secure Bike Parking and Showers Proposed Prj Mitigation	Select Proposed P	rj or Mitigation to incl	ude this strategy
Neig	ghborhood E	nhancement	

# N/A. Significant VMT Impact? Household: No

15% Below APC

15% Below APC



# Report 1: Project & Analysis Overview

Date: March 19, 2020 Project Name: Los Lirios Mixed-Use Project Project Scenario: Proposed Project Project Address: 113 S SOTO ST, 90033



## Housing

Affordable Housing	Family	64	DU
	General Retail	2.150	ksf
Retail	High-Turnover Sit-Down	2.150	ksf
	Restaurant Fast-Food Restaurant	0 000	ksf
	Quality Restaurant	0.000	ksf
	Auto Renair	0.000	ksf
	Home Improvement	0.000	ksf
	Eree-Standing Discount	0.000	ksf
	Movie Theater	0	Seats
	General Office	0.000	ksf
Office	Medical Office	0.000	ksf
	Liaht Industrial	0.000	ksf
Industrial	Manufacturina	0.000	ksf
	Warehousing/Self-Storage	0.000	ksf
	University	0	Students
	High School	0	Students
School	Middle School	0	Students
	Elementary	0	Students
	Private School (K-12)	0	Students
Other		0	Trips

Report 1: Project & Analysis Overview



	Analysis Res	sults					
Total Employees: 13							
	Total Population:	201					
Propose	d Project	With Mi	tigation				
424	Daily Vehicle Trips	424	Daily Vehicle Trips				
2,757	Daily VMT	2,757	Daily VMT				
5.4	Household VMT	5.4	Household VMT per				
5.4	per Capita	5.4	Capita				
21/2	Work VMT	21/2	Work VMT per				
N/A	per Employee	N/A	Employee				
	Significant VMT	Impact?					
	APC: East Los A	ngeles					
	Impact Threshold: 15% Belo	ow APC Average					
	Household = 7	7.2					
	Work = 12.7	,					
Propose	d Project	With Mi	tigation				
VMT Threshold	Impact	VMT Threshold	Impact				
Household > 7.2	No	Household > 7.2	No				
Work > 12.7	N/A	Work > 12.7	N/A				

# Report 2: TDM Inputs



		City code parking provision (spaces)	0	0	
		Actual parking provision (spaces)	0	0	
	Unbundle parking	Monthly cost for parking (\$)	\$0	\$0	
Parking	Parking cash-out	Employees eligible (%)	0%	0%	
Ū		Daily parking charge (\$)	\$0.00	\$0.00	
		Employees subject to priced parking (%)	0%	0%	
	Residential area parking permits	Cost of annual permit (\$)	\$0	\$0	
		(cont. on following page	2)		

# Report 2: TDM Inputs



TDM Strategy Inputs, Cont.								
Strate	Strategy Type Description Proposed Project Mitigations							
		Reduction in headways (increase in frequency) (%)	0%	0%				
Transit	Reduce transit headways	Existing transit mode share (as a percent of total daily trips) (%)	0%	0%				
		Lines within project site improved (<50%, >=50%)	0	0				
	Implement neighborhood shuttle	Degree of implementation (low, medium, high)	0	0				
		Employees and residents eligible (%)	0%	0%				
	Transit subsidies	Employees and residents eligible (%)	0%	0%				
		Amount of transit subsidy per passenger (daily equivalent) (\$)	\$0.00	\$0.00				
Education &	Voluntary travel behavior change program	Employees and residents participating (%)	0%	0%				
Encouragement	Promotions and marketing	Employees and residents participating (%)	0%	0%				
(cont. on following page)								

# Report 2: TDM Inputs



	TDM	Strategy Inputs,	Cont.					
Strategy Type Description Proposed Project Mitigations								
	Required commute trip reduction program	Employees participating (%)	0%	0%				
	Alternative Work Schedules and	Employees participating (%)	0%	0%				
	Telecommute	Type of program	0	0				
Commute Trip Reductions		Degree of implementation (low, medium, high)	0	0				
	Employer sponsored vanpool or shuttle	Employees eligible (%)	0%	0%				
		Employer size (small, medium, large)	0	0				
	Ride-share program	Employees eligible (%)	0%	0%				
	Car share	Car share project setting (Urban, Suburban, All Other)	0	0				
Shared Mobility	Bike share	Within 600 feet of existing bike share station - OR- implementing new bike share station (Yes/No)	0	0				
	School carpool program	Level of implementation (Low, Medium, High)	0	0				

# Report 2: TDM Inputs



TDM Strategy Inputs, Cont.								
Strate	еду Туре	Description	Proposed Project	Mitigations				
	Implement/Improve on-street bicycle facility	Provide bicycle facility along site (Yes/No)	0	0				
Bicycle Infrastructure	Include Bike parking per LAMC	Meets City Bike Parking Code (Yes/No)	0	0				
	Include secure bike parking and showers	Includes indoor bike parking/lockers, showers, & repair station (Yes/No)	0	0				
	Traffic calming	Streets with traffic calming improvements (%)	0%	0%				
Neighborhood Enhancement	improvements	Intersections with traffic calming improvements (%)	0%	0%				
	Pedestrian network improvements	Included (within project and connecting off- site/within project only)	0	0				

## Report 3: TDM Outputs

Date: March 19, 2020 Project Name: Los Lirios Mixed-Use Project Project Scenario: Proposed Project Project Address: 113 S SOTO ST, 90033



Version 1.2

	TDM Adjustments by Trip Purpose & Strategy													
					F									
					sed Work									
	Roduce parking supply	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
		070	070	076	076	070	070	070	070	070	070	070	070	
	Unbundle parking	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	TDM Strategy
Parking	Parking cash-out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	Appendix, Parking
	Price workplace parking	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1 - 5
	Residential area parking permits	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
	Reduce transit headways	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	TDM Strategy
Transit	Implement neighborhood shuttle	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	Appendix, Transit sections 1 - 3
	Transit subsidies	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Education &	Voluntary travel behavior change	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	TDM Strategy Appendix, Education &
Encouragement	Promotions and marketing	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	Encouragement sections 1 - 2
	Required commute trip reduction	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Commute Trip Reductions	Alternative Work Schedules and Telecommute Program	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	TDM Strategy Appendix, Commute Trip Reductions
	Employer sponsored vanpool or shuttle	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	sections 1 - 4
	Ride-share program	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Car-share	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	TDM Strategy
Shared Mobility	Bike share	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	Appendix, Shared
Sharea Mobility	School carpool program	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1 - 3

Date: March 19, 2020 Project Name: Los Lirios Mixed-Use Project Project Scenario: Proposed Project Project Address: 113 S SOTO ST, 90033



Version 1.2

**Report 3: TDM Outputs** 

	TDM Adjustments by Trip Purpose & Strategy, Cont.													
Place type: Urban														
		Home Ba Produ	sed Work uction	Home Ba Attra	sed Work Iction	Home Ba Produ	sed Other uction	Home Ba Attra	sed Other action	Non-Home Prod	Based Other uction	Non-Home Attr	Based Other action	Source
		Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	
	Implement/ Improve on-street bicycle facility	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	TDM Strategy
Bicycle Infrastructure	Include Bike parking per LAMC	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	Appendix, Bicycle Infrastructure sections 1 - 3
	Include secure bike parking and showers	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Neighborhood Enhancement	Traffic calming improvements	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	TDM Strategy Appendix,
	Pedestrian network improvements	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	Neighborhood Enhancement sections 1 - 2

	Final Combined & Maximum TDM Effect												
	Home Based Work Production		Home Based Work H Attraction		Home Ba. Produ	Home Based Other Production		Home Based Other Attraction		Non-Home Based Other Production		Non-Home Based Other Attraction	
	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	
COMBINED TOTAL	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
MAX. TDM EFFECT	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	

= 1	= Minimum (X%, 1-[(1-A)*(1-B)])							
	where X%=							
PLACE	urban	75%						
TYPE	compact infill	40%						
MAX:	MAX: suburban center 20%							
	suburban	15%						

Note: (1-[(1-A)\*(1-B)...]) reflects the dampened combined effectiveness of TDM Strategies (e.g., A, B,...). See the TDM Strategy Appendix (*Transportation Assessment Guidelines Attachment G*) for further discussion of dampening.

# **Report 4: MXD Methodology**

Date: March 19, 2020 Project Name: Los Lirios Mixed-Use Project Project Scenario: Proposed Project Project Address: 113 S SOTO ST, 90033



Version 1.2

MXD Methodology - Project Without TDM										
	Unadjusted Trips	MXD Adjustment	MXD Trips	Average Trip Length	Unadjusted VMT	MXD VMT				
Home Based Work Production	82	-34.1%	54	8.0	656	432				
Home Based Other Production	219	-40.6%	130	5.1	1,117	663				
Non-Home Based Other Production	60	-13.3%	52	7.4	444	385				
Home-Based Work Attraction	19	-42.1%	11	10.6	201	117				
Home-Based Other Attraction	177	-40.7%	105	5.9	1,044	620				
Non-Home Based Other Attraction	82	-12.2%	72	7.5	615	540				

# MXD Methodology with TDM Measures

		Proposed Project		Project with Mitigation Measures			
	TDM Adjustment	Project Trips	Project VMT	TDM Adjustment	Mitigated Trips	Mitigated VMT	
Home Based Work Production	0.0%	54	432	0.0%	54	432	
Home Based Other Production	0.0%	130	663	0.0%	130	663	
Non-Home Based Other Production	0.0%	52	385	0.0%	52	385	
Home-Based Work Attraction	0.0%	11	117	0.0%	11	117	
Home-Based Other Attraction	0.0%	105	620	0.0%	105	620	
Non-Home Based Other Attraction	0.0%	72	540	0.0%	72	540	

MXD VMT Methodology Per Capita & Per Employee										
Total Population: 201										
	Total Employees:	13								
	APC: East Los Angeles									
	Proposed Project	Project with Mitigation Measures								
Total Home Based Production VMT	1,095	1,095								
Total Home Based Work Attraction VMT	117	117								
Total Home Based VMT Per Capita	5.4 5.4									
Total Work Based VMT Per Employee	N/A N/A									

# Attachment C

## Additional Measures Regarding Archaeological and Paleontological Resources

Metro is requiring the following mitigation measures be implemented in addition to those specified in the Sustainable Communities Environmental Assessment prepared for the Project (City of Los Angeles Department of City Planning Case No. ENV-2019-2314-SCEA) (the "**SCEA**"):

- Prior to any Project-related earth-moving activity, Developer shall retain the services of a vertebrate paleontologist approved by the Natural History Museum of Los Angeles County Vertebrate Paleontology Section (the "Approved Paleontologist") to manage a paleontologic resource impact mitigation program in support of earthmoving activities associated with construction.
- 2. The Developer shall provide Metro with a report from the Approved Paleontologist that indicates such Approved Paleontologist's determination whether construction of the Project has the potential, with respect to the soil on the Site, to require excavation or blasting of parent material in older alluvium or in any younger alluvium lying below the uppermost five feet of such alluvium.
- 3. Where avoidance of parent material in older alluvium and in any younger alluvium lying below the uppermost five feet of such alluvium is not feasible, Developer shall:
  - 3.1. Ensure that all on-site construction personnel receive Worker Education and Awareness Program (WEAP) training that (a) educates such personnel in the regulatory framework that provides for protection of paleontological resources, and (b) provides such personnel with a familiarity with the diagnostic characteristics of the materials with the potential to be encountered and the appropriate procedures to be implemented if fossil remains are uncovered by earth-moving activities.
  - 3.2. Ensure that the Approved Paleontologist prepares a Paleontological Resource Management Plan ("**PRMP**") to guide the salvage, documentation and repository of representative samples of unique paleontological resources encountered during construction.
  - 3.3. Ensure that the Approved Paleontologist oversees the implementation of the PRMP, if unique paleontological resources are encountered during any excavation or blasting activities on the Site.
  - 3.4. Monitor blasting and earth-moving activities in older alluvium and in any younger alluvium lying below the uppermost five feet of such alluvium using a qualified paleontologist or an archeologist that is cross-trained in paleontology (the **"Monitor**") to determine if unique paleontological resources are encountered

during any excavation or blasting activities, consistent with the Approved Paleontologist's specified protocols or other comparable protocols.

- 3.5. Ensure that the Monitor recovers fossil remains uncovered by earth-moving activities.
- 3.6. Ensure that the Monitor records associated specimen/sample data (taxon, element) and corresponding geologic (stratigraphic rock unit, stratigraphic level, lithology) and geographic site data (location, depth), and will plot site locations on maps of the study area.
- 3.7. Ensure that all identifiable fossil remains are fully treated and that such treatment includes preparation of the remains by a paleontologic technician to the point of identification; identification to the lowest taxonomic level possible by knowledgeable paleontologists; curating and cataloguing the remains, plotting fossil site locations on maps of the study area, and entry of associated specimen data and corresponding geologic and geographic site data into appropriate computerized data bases by the technician; placement of the remains in the appropriate museum repository fossil collection for permanent storage and maintenance; and archiving of all associated data at the appropriate museum repository, where the data, along with the fossil remains, will be made available for future study by qualified scientific investigators. (Vertebrate and invertebrate fossil remains will be placed in the Natural History Museum of Los Angeles County's Vertebrate Paleontology and Invertebrate Paleontology Sections, respectively. Fossil plant remains will be placed in the University of California Museum of Paleontology.)
- 3.8. Ensure that the Approved Paleontologist prepares a comprehensive final report of results and findings that describes study area geology/stratigraphy, summarizes field and laboratory methods used, includes a faunal list and an inventory of curated/catalogued fossil remains, evaluates the scientific importance of the remains, and discusses the relationship of any newly recorded fossil site in the study area to relevant fossil sites previously recorded from other areas.
- 4. Prior to commencement of any construction, the Developer shall retain a qualified archaeologist meeting the Secretary of Interior's Professional Qualifications Standards for archaeology to (a) prepare a Cultural Resources Monitoring and Treatment Plan for known and unknown resources that are eligible or potentially eligible for the California Register or are unique archaeological resources; (b) oversee any Monitors proposed in the plan; and (c) implement RCM CUL-1 as set forth in the SCEA.

# Attachment D

# Site Plan and Renderings





View looking southwest from the corner of  $1^{\,\mbox{st}}$  and Soto Streets



View looking northwest from Soto Street


View looking west from Soto Street

# Next stop: vibrant communities.

**1<sup>st</sup> & Soto Joint Development** Planning & Programming Committee February 17, 2021 Legistar File: 2020-0767



#### Recommendations

AUTHORIZE execution of a JDA, ground lease and other developmentrelated documents with a joint venture between Bridge Housing Corporation – Southern California and East LA Community Corporation, or an affiliate thereof, for the construction and operation of a mixed-use affordable housing project on a portion of the Metro-owned property at and adjacent to the Metro L Line (Gold) Soto station in Boyle Heights in accordance with a term sheet attached to the Board report;

AUTHORIZE an exception to the Joint Development Policy, to allow for a \$3,117,000 (approximately 72%) discount to the \$4,317,000 fair market capitalized rent for the development site, which is above the current policy limit of 30%; and

ACTIONS related to the environmental review and clearance of the project



## Site/Project Overview

- Development Site:
  - 0.67-acre portion of
    1.08 acres of Metro
    property
- Proposed Project:
  - 62-64 apartments (20 PSH units for formerly homeless; 41-43 family affordable units; and one manager's unit)
  - Approx. 2,440 sq. ft. of commercial space
  - o Community room





# Background/Outreach

- ENA executed in June 2016 covers the proposed project and refurbishment of a Victorian home on Metro property across Soto St.
  - o Refurbishment of the Victorian home is not part of this JDA
- Proposed project is fully entitled and CEQA cleared by the City of LA; partially funded; construction plans are 75% complete
- Developer-led outreach has included:
  - 8 community meetings/workshops
  - o 5 focus groups (tenants, property owners, small businesses, etc.)
  - 10+ meetings with Boyle Heights CBOs
  - o 3 Boyle Heights Neighborhood Council (BHNC) meetings
  - o 4 BHNC Planning and Land Use Committee meetings (latest: Dec 2020)
  - Engagement with the Metro-established Boyle Heights Joint
    Development Design Review Advisory Committee (latest: Dec 2020)



## Key JDA & Ground Lease Terms

#### Key JDA Terms

- Metro's receipt of \$2,500/month holding rent, which will be applied to the capitalized rent due under the ground lease
- Recovery of certain Metro support costs via developer deposits
- $\circ$  Conditions for execution of the ground lease
- Key Ground Lease Terms
  - o Initial 57-year term, with an option to extend for 42 years
  - \$1,200,000 capitalized rent, plus additional rent for the option period
  - Percentage of project rent (33%) for the commercial space
  - Percentage of net proceeds (33%) from sales and refinancings
  - Pro-rata share of developer construction cost savings
  - Affordable housing occupancy restricted to households earning 30-60% of AMI (initial term) and up to 80% of AMI (option period)

#### 🚺 Metro

### **Capitalized Rent Discount**

- \$1,200,000 in capitalized rent represents a discount of 72% (\$3,117,000) off the \$4,317,000 appraised fair market capitalized rent
- Discount is in excess of the JD policy limit of 30%
- Proposed discount is necessary for the project's financial feasibility after analyzing project's finances and funding alternatives
- The proposed higher discount results from the following factors:
  - A relatively high market value for the development site
  - Current reduced tax credit valuations = less equity for the project
  - Restricted affordable rents that cannot be set to absorb higher costs
  - Limited or restricted public subsidies available to support the project



#### **Next Steps**

- Execute the JDA
- Finalize project design and community updates
  - o BHNC in 1<sup>st</sup> quarter of 2021
- Meet the conditions necessary for Ground Lease execution:
  - Secure all project financing, including tax credit equity
  - Satisfy entitlement-related conditions/Secure building permits
- Execute the Ground Lease and start construction (anticipated in 4<sup>th</sup> quarter of 2021)
- Complete construction (anticipated in 4<sup>th</sup> quarter of 2023)

