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File #: 2015-0438, File Type: Contract

Agenda Number: 37.

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**REVISED**  
**CONSTRUCTION COMMITTEE**  
**JUNE 18, 2015**

**SUBJECT: STAFFING REQUEST FOR ENGINEERING & CONSTRUCTION DEPARTMENT'S TRANSIT PROJECTS**

**ACTION: APPROVE RECOMMENDATIONS**

**RECOMMENDATION**

**WITHDRAWN:** AUTHORIZE the Chief Executive Officer to amend the **FY16 budget to add:**

- A. ~~37~~ 18 **non-contract full-time equivalent (FTE) positions** (with 7 non-contract FTE positions already accounted in the FY 16 budget) by converting new Construction Management Support Services(CMSS)/consultant positions to support Measure R transit projects for Engineering & Construction (E&C) Department;
- B. ~~3~~ 2 non-contract FTE positions by converting consultant positions to support Environmental Compliance and Sustainability projects for E&C Department (Refer to Appendix 1).
- C. ~~6~~ 3 non-contract FTE positions to support capital transit projects for E&C Department (refer to Appendix 2).
- D. ~~8~~ 4 non-contract FTE positions by converting new CMSS/consultant positions to support Measure R transit projects for Program Management Office (Refer to Appendix 3).
- E. ~~7~~ 4 non-contract FTE positions by converting new CMSS/consultant positions to support Measure R transit projects for Vendor/Contract Management Department (Refer to Appendix 4).
- F. ~~7~~ 4 non-contract FTE positions by converting new CMSS/consultant positions to support Measure R transit projects for Communications Department (Refer to Appendix 5).
- G. ~~3~~ 2 non-contract FTE positions to support Measure R transit projects for Countywide Planning and Development Department (Refer to Appendices 6-1 and Appendix 6-2).

**ISSUE**

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In recent quarterly meetings with the Federal Transit Authority (FTA), FTA has expressed repeated concerns over Metro's staffing levels. There were also discussions over Metro's succession planning. With the on-going construction of the three main transit projects, Crenshaw/LAX, Regional Connector and Westside Purple Line Extension Section 1 and initiating preliminary engineering design for Westside Purple Line Extension Section 2 in addition to numerous smaller transit capital and state of repair projects, FY 16 represents a year of tremendous growth for E&C department and all the other supporting departments such as Program Management Office, Vendor/Contract Management, Communications and Countywide Planning and Development who provide critical support to these projects. The total capital budget for these four main transit projects alone in FY 15 is approximately \$710 million with a total current staffing of 201 Metro and CMSS/consultant positions. With a proposed capital budget of \$1.150 billion for the four major transit projects in FY 16 (an increase of approximately 25 percent) the total Metro FTE and CMSS/consultant positions will need to increase from 201 positions to approximately 276 positions as the projects ramp up and come on stream.

Through For the FY 16 budget process, it was agreed to include 10 non-contract Metro positions as seed positions in order to allow staff to commence recruitment by advertising these positions. It was further agreed that the remaining request for 36 positions will go through a separate process via the Board as a direct response to previous Board motions. Last month, as part of the FY16 Budget, the Board approved 7 out of the 10 non-contract Metro positions for E&C. These Board approved positions are highlighted in Table A. Pending the CEO's mid-year cost budgeting exercise, staff has reduced the total request for non-contract Metro positions by approximately one-half.

In order to support the main transit projects currently under construction, E&C and supporting departments are requesting a total of ~~74~~ 37 non-contract FTE positions.

- ~~46~~ 23 positions for Engineering & Construction (Refer to Table A).
- ~~8~~ 4 non-contract Metro FTEs for Program Management Office.
- ~~7~~ 4 non-contract Metro FTEs for Vendor/Contract Management.
- ~~7~~ 4 non-contract Metro FTEs for Communications.
- ~~3~~ 2 non-contract Metro FTEs for Countywide Planning and Development.

Based on the results of the pilot project and cost benefit analysis performed by E&C on the CMSS/consultant model to determine which functions should be brought in-house, staff has determined that partial conversion of the approximately ~~62~~ 32 (of the ~~74~~ 37) new staffing positions from private to public sector will save up to \$~~46~~ \$22 million through the life of project for the main transit projects:

- ~~37~~ 18 non-contract Metro FTEs (including 7 positions already included in the FY 16 budget) for Engineering & Construction for the main transit projects.

- 3 2 non-contract Metro FTEs for Engineering & Construction for Environmental Compliance and Sustainability.
- 8 4 non-contract Metro FTEs for Program Management Office.
- 7 4 non-contract Metro FTEs for Vendor/Contract Management.
- 7 4 non-contract Metro FTEs for Communications.

## **INTRODUCTION**

Metro's construction management and consulting services commonly referred to as construction management support services (CMSS) is a concept that began in the mid 1990's in response to a Board-directed investigation to research more effective and innovative approaches to project delivery. At the same time, the Metro Board approved the adoption of a Joint Project Office now called the Integrated Project Management Office (IPMO). The CMSS concept under the IPMO supplements Metro staff with consultants in managing Metro projects. The consultant staff members are an extension of Metro staff and under the direction of Metro.

The scope of the CMSS contract includes a variety of project management and construction management staffing disciplines that may be required during the course of construction. The consultants provide an extension of staff to various Metro Departments represented in the project team or supported by the project team - example Departments are Engineering and Construction, Program Management Office, Vendor/Contract Management, Communications, Enterprise Risk and Safety, and Countywide Planning and Development.

The vast majority of CMSS/consultant staff (used as an extension of Metro staff) are utilized on the main transit projects presently underway - Crenshaw/LAX, Regional Connector, Westside Section 1, with Westside Section 2 imminent. However, consultants are used to a lesser extent to supplement Metro staff for other project areas - Highways, Regional Rail, Capital and Environmental. The need for, and the pattern of usage, varies by project type and is dependent upon the specific needs of the various projects. On a typical transit project, the CMSS/consultant staff comprises of approximately 50 percent of the total staffing with the remaining 50 percent staffed by Metro personnel.

## **DISCUSSION**

In response to several board motions, staff examined the cost of outsourcing construction management and consulting services and completed a pilot project study and a preliminary cost benefit analysis. The key goals and objectives of the pilot project study and preliminary cost benefit analysis were to:

- a. Deliver transportation infrastructure projects safely, on time, and within budget;

- b. Manage resources effectively and efficiently resulting in tangible cost savings;
- c. Build bench strength in the Metro work force and create a succession plan for the future; and
- d. Support Metro's commitment to Disadvantaged Business Enterprise (DBE) and Small Business Enterprise (SBE)

Due to the voter-approved Measure R program, Metro is undertaking one of the largest capital improvement programs in the nation which is an unprecedented challenge for project delivery. The successful project delivery of these transit projects is highly dependent on providing sufficient staffing resources in order to lower cost, exercise fiscal responsibility, enhance our safety-conscious culture and increase quality and efficiency.

### Staffing Assumptions

The staffing assumptions used in the staffing analysis, pilot project study and cost benefit analysis consisted of the following:

1. All existing CMSS/consultant positions in FY 15 shall remain.
2. Highly specialized technical areas of expertise (tunneling resident engineer, noise/vibration engineer, land surveyor, etc.) shall remain as consultants.
3. In order to address peak fluctuations in the work including construction work that requires swing and night shifts, staff shall continue to use CMSS/consultant positions on an as-needed basis.
4. To honor Metro's commitment to Disadvantage Business Enterprise (DBE) and Small Business Enterprise (SBE), existing CMSS/consultant positions in these categories shall remain as consultants.

### Staffing Analysis

In preparation for the Metro FY16 budget process that establishes the Metro headcount for each subsequent fiscal year, staff assessed the project work for the coming year and, based on the projected annual capital expenditure per project, the project team established the overall staffing requirement for each project. From this capital budget information, the overall total monthly staffing requirements are estimated for each project using a variety of scenarios dependent on assumed levels of future capital funding. The staffing is broken down by Metro department(s) and divided between the public and private sector. The monthly staffing requirements are reviewed to ascertain the optimal split between public sector and private sector which is typically a 50/50 ratio. Additionally, staff considered a number of potential funding scenarios for potential longer term projects to assist in providing an understanding of what the staffing requirements might be over an extended period of time.

In order to adequately staff the main transit projects for the first six months of FY 16 and effectuate a cost savings of at least 25 percent, staff is requesting a total of ~~74~~ 37 new non-contract Metro positions for the first six month of FY 16 to support Measure R transit and capital projects of which ~~62~~ 32 CMSS/consultant positions will be converted to new Metro non-contract positions:

1. ~~46~~ 23 non-contract positions for Engineering & Construction of which ~~40~~ 20 non-contract positions are CMSS/consultant conversions.
  - a. ~~37~~ 18 non-contract positions are CMSS/consultant conversions for the main transit projects.
  - b. ~~3~~ 2 non-contract positions are consultant conversions for Environmental Compliance and Sustainability.
2. ~~8~~ 4 non-contract positions for Program Management Office; all ~~8~~ 4 positions are CMSS/consultant conversions.
3. ~~7~~ 4 non-contract positions for Communications under Community Relations (Construction Relations); all ~~7~~ 4 non-contract positions are CMSS/consultant conversions.
4. ~~3~~ 2 non-contract positions for Countywide Planning and Development.
5. ~~7~~ 4 non-contract positions for Vendor/Contract Management; all ~~7~~ 4 positions are CMSS/consultant conversions.

As a result, staff is proposing a ~~paradigm~~ an interim shift of the CMSS/consultant model (that dates back to the mid-1990s) from a 50/50 ratio of CMSS/consultant positions and Metro positions to a ~~30/70~~ 70/30 ratio. Most of the new staffing proposed for E&C is ~~in~~ for the first six months of FY 16 to support two of the main transit projects, Crenshaw/LAX and Regional Connector, approximately ~~70~~ 65 percent which is equivalent to ~~33~~ 24 of the ~~46~~ 23 positions. Less than ~~9~~ 20 percent of new staffing (equivalent to ~~4~~ 6 positions) proposed for E&C is ~~in~~ for the first 6 months of FY 16 support Westside Purple Line Extension Section 1.

The intent is to fully staff the Crenshaw/LAX and Regional Connector Transit Corridor projects so that these new non-contract Metro positions will gradually phase into staffing for Westside Purple Line Extension Sections 1 and 2 by the end of 2017 once the Crenshaw/LAX and Regional Connector Transit Corridor projects start to ramp down. This will mean that Westside Purple Line Section 1 will have a heavier reliance on CMSS/consultant staff for FY 16 and FY17 compared with Crenshaw/LAX and Regional Connector Transit Corridor projects. Staff carefully and conscientiously determined the appropriate staffing levels to ensure that all these new non-contract Metro positions will have work for the next 10 years or more.

Furthermore, attrition plays a significant influence in the staffing analysis of ~~46~~ 23 new non-contract E&C positions in FY 16. Currently, there are a total of 127 existing staffing positions for Transit in E&C. In the next five to ten years, it is estimated that approximately 44 percent (56 out of 127) of the

existing E&C staff in Transit are expected to retire.

There are significant tangible benefits in converting CMSS/consultant functions to new Metro positions such as:

- Providing a cost savings for the life of the project as the average cost of consultants is significantly more than the average cost of Metro positions.
- Preserving the intellectual, political and commercial capital of the organization by maintaining a trained and experienced work force.
- Creating flexibility, career advancement and build a succession plan for the organization.

As for the ~~nine~~ five (out of ~~74~~ 37) new non-contract Metro positions that are not CMSS/consultant conversions, there is a strong business case to use in-house Metro personnel versus consultant positions to support the four main transit corridor projects and the capital improvement projects. Refer to Appendices ~~2, 6-1 and 6-2~~ for more information.

Based on our preliminary calculations, the potential annual cost savings of using ~~nine~~ five in-house Metro personnel in lieu of CMSS/consultant positions is approximately ~~\$554,000~~ \$447,000 with up to ~~\$3.9~~ \$3.1 million in potential savings for the life of projects as outlined in Table A-1. ~~Please note that the Sr. Real Estate Officer position is strictly a non-contract Metro position and its responsibilities are not transferable to a CMSS/consultant position.~~

### Pilot Project Study

The pilot project study was initiated in November 2014 for the Crenshaw/LAX Transit Corridor project. For the pilot project study, staff transitioned certain new CMSS/consultant positions with non-contract Metro positions by either using existing “vacant” and/or “borrowed” Metro positions. A total of ~~new seven~~ seven new CMSS/consultant positions were converted to non-contract Metro positions with annual cost savings of approximately \$1.27 million (with a 10 percent discount factor applied to account for market conditions). Two of the seven positions, specifically the Sr. Community Relations Officer and Community Relations Officers, were “borrowed” positions provided by Human Resources Department on a temporary basis only. Therefore, in order to make these two “borrowed” positions permanent, they are included as part of the seven non-contract positions CMSS/consultant conversions under Communications.

As shown in Table A, the total annual cost for these seven positions under the CMSS/consultant contract is approximately \$3.2 million. By converting these seven CMSS/consultant positions to new Metro positions, the total cost for these seven new Metro functions was reduced to \$1.8 million. Since these seven positions were recruited within the mid-point salary ranges of Metro's pay scale, a 10 percent (in lieu of 30 percent) discount was applied against the cost savings of \$1.4 million to

account for current market conditions and salary variations which yielded a total potential cost savings of approximately \$1.27 million.

### Cost Benefit Analysis

Due to the successful results of the pilot project study, staff performed a cost benefit analysis that identified the capital budget, monthly costs and staffing needs of all individual projects underway, including those that may be undertaken in the next five to ten years. In addition, total costs and total staffing needs were compiled over that period. The projected staffing numbers and costs were compared against industry norms and compared to the details provided to and approved by the Federal Transit Administration as part of Full Funding Grant Agreement related submittals for the respective projects.

The cost benefit analysis focused on the four main transit corridor projects such as Crenshaw/LAX, Regional Connector, and Westside Purple Line Extension Sections 1 and 2 and Environmental Compliance and Sustainability division. Based on the staffing assumptions described above, the results of the analysis indicate that a potential cost savings of ~~\$46~~ \$23 million can be achieved by converting ~~62~~ 32 new CMSS/consultant positions to new non-contract Metro positions. Refer to Table C and Table C-1.

- ~~37~~ 18 positions for Engineering & Construction for the main transit projects.
- ~~3~~ 2 positions for Engineering & Construction for Environmental Compliance & Sustainability.
- ~~8~~ 4 non-contract Metro FTEs for Program Management Office.
- ~~7~~ 4 non-contract Metro FTEs for Vendor/Contract Management.
- ~~7~~ 4 non-contract Metro FTEs for Communications (Community Relations).

The total projected budgeted value of the CMSS/consultant contracts for the main transit projects and Environmental Compliance and Sustainability is approximately \$282 million. Refer to the Table D below. The total cost for approximately ~~62~~ 32 CMSS/consultant positions for the life of projects for the four main transit projects including Environmental Compliance & Sustainability is approximately ~~\$165~~ \$79 million. By converting these ~~62~~ 32 CMSS/consultant positions to non-contract Metro positions, the total cost for these Metro functions is reduced to approximately ~~\$99~~ \$47 million. This results in a potential cost savings of ~~\$66~~ \$32 million. However, by applying a 30 percent discount against ~~\$66~~ \$32 million to account for market conditions, salary variations, and other staffing considerations, the total potential cost savings is approximately ~~\$46~~ \$22 million.

The cost benefit analysis has to be tempered by a number of staffing considerations including but not be limited to, actual market conditions (and associated salaries) for professional staff, availability of staff with approximate qualifications and experience, staffing procurement lead-in times, SBE/DBE, flexibility of using consultant staff on as-needed basis, long term human resource costs related to Metro staff benefits such as pension, obligations, etc.

<b>TABLE E- PROJECT NAME</b>	<b>CMSS/CONSULTANTS</b>	<b>ESTIMATED CONTRACT VALUE (Life of Project)</b>
Crenshaw/LAX Transit Corridor Project	Stantec, PMA, CRSS & Hill International	\$67 million
Regional Connector Transit Corridor Project	Arcadis, CPVJ, Hill International	\$45 million
Westside Purple Line Extension Section 1	Westside Extension Support team, J.V. & Hill International	\$69 million
Westside Purple Line Extension Section 2	TBD*	\$63 million
Environmental Compliance and Sustainability	Arcadis	\$38 million
<b>TOTAL</b>	<b>\$282 million</b>	

\*CMSS contracts have not yet been awarded to Westside Purple Line Extension Section2.

**DETERMINATION OF SAFETY IMPACT**

This Board action will not have an impact on established safety standards.

**FINANCIAL IMPACTS**

The following funds are included in the FY 16 budget for this action:

- Project no. 865512 and 860003 Crenshaw/LAX Transit Corridor Project in Cost Centers 6810, 6940, 7160, 8110, 8410, 8420, 8510 and 8610.
- Project no. 860228 Regional Connector Transit Corridor Project in Cost Centers 6810, 6940, 7160, 8110, 8410, 8420, 8510 and 8610.
- Project no. 865518 Westside Purple Line Extension Section 1 in Cost Centers 8010 and 8510.

The conversion of the CMSS/Consultant positions to new Metro non-contract positions effectuates a cost savings of up to \$46 \$22 million throughout the life of project for the main transit projects including Environmental Compliance and Sustainability. This potential cost savings incurred will be reallocated to project contingency. Since this is a multi-year project, the Executive Director of



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Engineering and Construction will be responsible for allocating the costs in future years.

### **ALTERNATIVES CONSIDERED**

The Board may choose not to authorize the conversion of CMSS/Consultant positions to non-contract FTEs. This is not recommended since the impacts of insufficient staffing at appropriate levels include:

- Heavier reliance on CMSS/consultant positions.
- Loss of potential cost savings of up to ~~\$46~~ \$22 million for these positions for life of project.
- Inability to preserve the intellectual, political and commercial capital of the organization.
- Inability to cross-train in the most effective and efficient manner to provide a wider diversity of skills and create flexibility in the workforce.
- Inability to create a succession plan for the future.

Furthermore, if the nine non-contract Metro positions listed in Table 2-4 A-1 are not approved by the Board, staff will have to outsource and use CMSS/consultant positions with a loss of potential cost savings of up to ~~\$3.9~~ \$3.1 million for life of projects.

### **NEXT STEPS**

1. Upon Board authorization, Metro will work with Finance and Budget, Human Resources and other affected Metro Departments to secure new Metro positions for FY 16.
2. Staff will submit their FY 16 CMSS Contract budget to the Board for approval in June 2015.
3. Staff will report back by December 2015 on the actual number of non-contract Metro positions hired and placed on the projects. This report will include the cost impacts effectuated by the conversion of positions affecting the CMSS, Metro Admin and Contingency line items by project.

### **ATTACHMENTS**

- A. Table A – List of E&C Positions
- A. Table A - List of E&C Positions
- B. Table A-1 Potential Cost Savings of 9 Metro FTEs
- C. Table B - Pilot Project Study
- D. Table C - Cost Benefit Analysis
- E. Table C-1 -FY16 CMSS/Consultant Conversion Cost Savings
- F. Appendix 1 - Environmental Compliance & Sustainability
- G. Appendix 2 - Transit Capital Projects
- H. Appendix 3 - Program Management Office
- I. Appendix 4 - Vendor/Contract Management

- J. Appendix 5 - Communications
- K. Appendix 6 - Countywide Planning and Development

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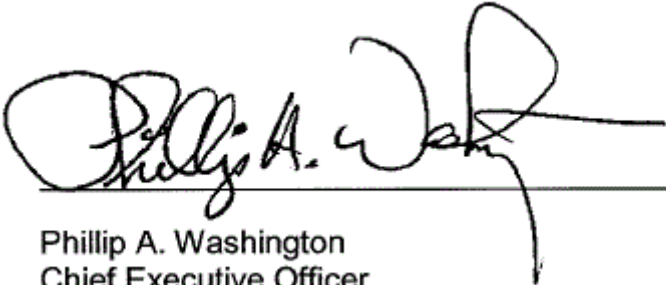
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Phillip A. Washington  
Chief Executive Officer

**Table A**  
**Engineering & Construction**  
**FY16 FTE Request for Consultant Conversion Positions-**

No. FTE	Cost Center	Project No.	Position Title	Job Description	Justification	QTR Needed
2	8410	860228 -- RC	Construction Inspector	<b>Construction Inspectors:</b> This position inspects each stage of construction of Regional Connector; track, tunnel and stations as well as all contractors activities, to be in accordance with plans and specs. Prepares non-conformance reports; maintains daily logs; monitor contractor testing activities; support construction safety functions; coordinates Metro test lab activities; and oversee DB inspection activities.	Construction Management Department does not have the personnel to assign to these activities at this point in time. Metro does not want to use consultants at this time due to the higher cost of consultants.	Q1
1	8410	860228 -- RC	Construction Inspector	<b>Construction Inspector:</b> This position inspects each stage of construction of Regional Connector; track, tunnel and stations as well as all contractors activities, to be in accordance with plans and specs. Prepares non-conformance reports; maintains daily logs; monitor contractor testing activities; support construction safety functions; coordinates Metro test lab activities; and oversee DB inspection activities.	Construction Management Department does not have the personnel to assign to these activities at this point in time. Metro does not want to use consultants at this time due to the higher cost of consultants.	Q1
1	8410	860228 -- RC	* Senior Construction Manager	<b>Senior Construction Manager:</b> This position oversees and manages rail facilities construction projects, ensures work is accomplished according to specification, plans and is on schedule and within budget. Sets priorities for staff and ensures that staff are accomplishing assigned tasks.	Construction Management Department does not have the personnel to assign to these activities at this point in time. Metro does not want to use consultants at this time due to the higher cost of consultants.	Q1
1	8320	860228 -- RC	Sr. Engineer (Geotechnical)	To supervise geotechnical items on the Regional project.	The Regional Connector has several geotechnical elements that would require geotechnical engineering reviews. Metro Engineering is expecting to receive a very large number of submittals that require our review. With the Design Builder already on board on two of these projects and their aggressive schedule to start construction in the summer, a new position is needed in order to assist the project in review of the geotechnical items on these projects.	Q1
1	8320	860228 -- RC	Sr. Engineer (Systems)	Supervise and manage all activities related systems integration on the Regional Connector project	An experienced System Integration Engineer is needed to support the Regional Connector project during design & construction. The Sr. Systems Integration Engineer is vital to ensure a seamless integration from New Systems to New Systems, New Systems to Existing Systems, New Systems to Facilities and Integrated Testing (Test Plans, Field Testing etc.). An integrated Rail System is vital for Metro's Operational needs.	Q1
1	8110	860228 -- RC	Quality Assurance Manager	Performs quality audits, surveillances, field inspection and monitoring of design, new construction modifications, as required, including monitoring of laboratory and manufacturers audits, surveillance and data analysis as directed. Coordinate with Director of Quality Management in the establishment, implementation and maintenance of Project Quality related goals; and determination and management of budgetary and staffing requirements; implementation of Quality Program requirements for assigned projects, and supervision of subordinate Quality Management staff assigned to the project.	Performs quality audits, surveillances, field inspection and monitoring of design, new construction modifications, as required, including monitoring of laboratory and manufacturer audits, surveillances and data analysis as directed. Coordinates with Director of Quality Management in the establishment, implementation and maintenance of Project Quality related goals; determination and management of budgetary, staffing requirements; implementation of Quality Program requirements for the Regional Connector project, and supervision of subordinate Quality Management staff assigned to the project.	Q1
1	8420	860228 -- RC	* Sr. Environmental Specialist	Assist in the execution of environmental compliance and sustainability-related projects of the Regional Connector Project.	Current incumbent is a consultant supporting full-time in Measure R project, environmental, or sustainability related program. This is a conversion of full-time seconded staff to regular Metro staff to reduce overall project delivery cost. Loaded per unit labor cost difference between seconded consulting staff and equivalent Metro position is up to 350%, depending on position.	Q1
<b>8 Subtotal</b>						

**Table A**  
**Engineering & Construction**  
**FY16 FTE Request for Consultant Conversion Positions-**

No. FTE	Cost Center	Project No.	Position Title	Job Description	Justification	QTR Needed
3	8410	865512 -- C/LAX	Senior Construction Inspector	Inspector, Southwest Yard (1): This position is for Southwestern Yard Project. The Inspector will support the R.E. and be required to inspect and monitor installation of the work; review and prepare reports; review and interpret plans and specifications; ensure compliance with codes, standards and contract documents; assist in resolving problems in the field; coordinate work with other agencies. <b>Inspector, Systems (2 each):</b> This position is for Crenshaw/LAX Transit Project. The Systems Inspector will support the project R.E. and be required to inspect and monitor installation of the systems work; review and prepare reports; review and interpret plans and specifications; ensure compliance with codes, standards and contract documents; assist in resolving problems in the field; coordinate work with other agencies. <b>Inspector, MEP (2 each):</b> This position is for Crenshaw/LAX Transit Project. The MEP Inspector will support the project R.E. and be required to inspect and monitor installation of the mechanical, electrical and plumbing work; review and prepare reports; review and interpret plans and specifications; ensure compliance with codes, standards and contract documents; assist in resolving problems in the field; coordinate work with other agencies.	Construction Management Department does not have the personnel to assign to these activities at this point in time. Metro does not want to use consultants at this time due to the higher cost of consultants.	Q1
1	8410	865512 -- C/LAX	Director of Construction Management	<b>Dir. Construction Manager:</b> This position is for Crenshaw/LAX Transit Project, Segment B. This individual will oversee and manage construction, development of workplans, schedules and estimates; administer and monitor work for compliance with contract documents; coordinate with Metro staff and outside agencies; review change requests and prepare change notice justifications.	Construction Management Department does not have the personnel to assign to these activities at this point in time. Metro does not want to use consultants at this time due to the higher cost of consultants.	Q1
1	8410	865512 -- C/LAX	Sr Construction Manager (SPECIALIST: SYSTEMS)	<b>RESIDENT ENGINEER</b> This position is for Crenshaw/LAX Transit Project. The Senior Construction Manager will act as Systems Resident Engineer and be required to oversee and manage construction, development of workplans, schedules, estimates and specifications; administer and monitor work for compliance with contract documents; coordinate with Metro staff and outside agencies; review change requests and prepare change notice justifications. This position reports to the Director Construction Management through a matrix organization.	This position requires a Systems specialist to support the Resident Engineers for the Mainline Crenshaw/LAX Project.	Q1
1	8410	865512 -- C/LAX	Construction Manager	The Construction Manager will be required to analyze data, specifications, and drawings; assist in monitoring work for compliance with schedule, budget, technical and legal requirements; prepare technical reports and correspondence; assist in coordination with outside agencies; maintain projects records; monitor status of submittal and design reviews. This position reports to the Director Construction Management	The position is required to support the Office Engineer role for Crenshaw/LAX project.	Q2
1	8420	865512 -- C/LAX	* Sr. Environmental Specialist	Assist in the execution of environmental compliance and sustainability for the Crenshaw/LAX Project.	Current incumbent is a consultant supporting full-time in Measure R project, environmental, or sustainability related program. This is a conversion of full-time secunded staff to regular Metro staff to reduce overall project delivery cost. Loaded per unit labor cost difference between secunded consulting staff and equivalent Metro position is up to 350%, depending on position.	Q1
1	8110	865512 -- C/LAX	* Sr. Quality Engineer	The Sr. Quality Engineer will be required to coordinate with construction inspectors and monitor field construction activities; coordinate verification testing; evaluate quality performance.	Performs design document review, construction contract review, design and construction quality audits and surveillances, field inspection for the project as required, including laboratory and manufacturer audits and surveillances. Arranges for Metro's verification test laboratory and coordinates the tests with Inspection and Construction Management.	Q1

**Table A**  
**Engineering & Construction**  
**FY16 FTE Request for Consultant Conversion Positions-**

No. FTE	Cost Center	Project No.	Position Title	Job Description	Justification	QTR Needed
<b>8 Subtotal</b>						
1	8420	865518 -- WPL1, 865522 -- WPL2	Principal Environmental Specialist	Assist in the execution of environmental compliance and sustainability-related projects of the Purple Line Extension.	Current incumbent is a consultant supporting full-time in Measure R project, environmental, or sustainability related program. This is a conversion of full-time secunded staff to regular Metro staff to reduce overall project delivery cost. Loaded per unit labor cost difference between secunded consulting staff and equivalent Metro position is up to 350%, depending on position.	Q1
1	8110	865518 -- WPL1	Sr. Construction Inspector	Perform quality audits, surveillances, field inspection and monitoring of design, new construction, modifications, as required, including monitoring of laboratory and manufacturer audits, surveillance and data analysis as directed.	Performs quality field surveillances, monitoring of new construction, modifications, as required, including monitoring of testing laboratory and manufacturer audits, surveillances and data analysis for the Purple Line Extension, Section 1 as directed by the Quality Assurance Manager.	Q1
<b>2 Subtotal</b>						
<b>18 Grand Total</b>						

\* These positions have been approved by the Board at the May 28, 2015 Special Board Meeting - FY 16 Budget .

<b>TABLE A-1 Potential Cost Savings of 9 Metro FTEs</b>	<b>Annual CMSS Burdened Rate</b>	<b>CMSS Hourly</b>	<b>Metro Annual Burdened Rate</b>	<b>Metro Hourly</b>	<b>Difference in Salary</b>	<b>Cost Savings</b>	<b>Potential Savings</b>
Director, Construction Management	\$ 462,560	\$ 245	\$ 280,218	\$ 148	61%	39%	\$ 182,342
<del>Construction Manager</del>	<del>\$ 251,104</del>	<del>\$ 133</del>	<del>\$ 207,680</del>	<del>\$ 110</del>	83%	17%	<del>\$ 43,424</del>
<del>Construction Manager</del>	<del>\$ 251,104</del>	<del>\$ 133</del>	<del>\$ 207,680</del>	<del>\$ 110</del>	83%	17%	<del>\$ 43,424</del>
Sr. Engineering Manager	\$ 462,560	\$ 245	\$ 252,213	\$ 134	55%	45%	\$ 210,347
Sr. Engineer	\$ 262,432	\$ 139	\$ 207,680	\$ 110	79%	21%	\$ 54,752
<del>Supervising Engineer</del>	<del>\$ 319,072</del>	<del>\$ 169</del>	<del>\$ 252,213</del>	<del>\$ 84</del>	79%	21%	<del>\$ 66,859</del>
Signage & Environmental Design Manager	\$ 294,528	\$ 156	\$ 207,680	\$ 110	71%	21%	\$ 86,848
Sr. Environmental Designer	\$ 262,432	\$ 139	\$ 158,592	\$ 84	60%	40%	\$ 237,888
					<b>TOTAL POTENTIAL COST SAVINGS</b>		<del>\$ 796,846</del> <b>\$ 638,139</b>
					<b>30% Discount</b>		<del>\$ 554,292</del> <b>\$ 446,697</b>
					<b>LIFE OF PROJECTS (7 years)</b>		<del>\$ 3,880,054</del> <b>\$ 3,126,881</b>

<b>TABLE B- PILOT PROJECT STUDY</b>	<b>Annual CMSS Burdened Rate</b>	<b>CMSS Hourly</b>	<b>Metro Annual Burdened Rate</b>	<b>Metro Hourly</b>	<b>Difference in Salary</b>	<b>Cost Savings</b>	<b>Difference</b>
DEO, Project Mmgt	\$617,376	\$327	\$335,996	\$178	54%	46%	\$281,380
Director, Construction Management	\$462,560	\$245	\$280,218	\$148	61%	39%	\$182,342
Director, Construction Management	\$462,560	\$245	\$280,218	\$148	61%	39%	\$182,342
Director, Construction Management	\$462,560	\$245	\$280,218	\$148	61%	39%	\$182,342
Director, Construction Management	\$462,560	\$245	\$280,218	\$148	61%	39%	\$182,342
Sr. Construction Relations Officer	\$396,480	\$210	\$158,592	\$84	40%	60%	\$237,888
Community Relations Officer	\$319,072	\$169	\$158,592	\$84	50%	50%	\$160,480
<b>TOTAL</b>	<b>\$3,183,168</b>		<b>\$1,774,052</b>			<b>45%</b>	<b>\$1,409,116</b>
					<b>With 10% DISCOUNT</b>	<b>41%</b>	<b>\$1,268,204</b>



TABLE C- COST BENEFIT ANALYSIS	FY 16			TOTAL		
	BURDENED COST	CMSS/ Consultant	Metro	Potential Cost Savings	CMSS/ Consultant	Metro
Crenshaw/LAX	\$ 8,060,294	\$4,856,400	\$ 3,203,894	\$ 29,458,218	\$17,924,200	\$ 11,534,018
	\$ 3,795,441	\$2,355,379	\$ 1,440,084	\$14,139,945	\$8,603,616	\$ 5,536,329
Regional Connector	\$ 7,977,230	\$ 5,171,000	\$ 2,806,230	\$ 35,204,269	\$ 22,414,000	\$ 12,790,269
	\$ 3,928,522	\$2,587,252	\$1,341,270	\$ 16,898,049	\$10,758,720	\$ 6,139,329
Westside PLE 1	\$ 2,387,257	\$ 1,736,000	\$ 651,257	\$ 44,845,534	\$ 28,096,000	\$ 16,749,534
	\$ 1,806,839	\$ 1,081,748	\$ 725,091	\$21,525,856	\$13,486,080	\$ 8,039,776
Westside PLE 2				\$ 46,478,546	\$ 25,892,000	\$ 20,586,546
	\$ -	\$ -	\$ -	\$ 22,309,702	\$ 12,428,160	\$ 9,881,542
Environmental & Sustainability	\$ 941,074	\$ 518,829	\$ 422,785	\$ 9,410,740	\$ 4,664,601	\$ 4,746,139
	\$ 627,382	\$ 345,526	\$ 281,856	\$ 4,517,155	\$ 2,239,008	\$ 2,278,147
TOTAL	\$ 19,365,855	\$ 12,281,689	\$ 7,084,166	\$165,397,307	\$ 98,990,801	\$ 66,406,506
	\$10,158,184	\$ 6,369,905	\$ 3,788,301	\$ 79,390,707	\$ 47,515,584	\$ 31,875,123
		30% Discount	\$ 4,958,916		30% Discount	\$ 46,484,554
						\$ 22,312,856

Attachment D

**Attachment C-1  
CMSS/Consultant Conversion Cost Savings for FY2016-**

WESTSIDE PURPLE LINE EXTENSION SECTION 1 PROJECT-						
PROJECTED COST OF CMSS/CONSULTANT			METRO			YEARLY COST SAVINGS FY16
POSITION	HOURLY BURDENED RATE CY2016	YEARLY BURDENED SALARY	EQUIVALENT POSITION	HOURLY BURDENED RATE	YEARLY BURDENED SALARY	
Resident Engineer	\$194	\$365,684	Sr Engineering Manager	\$134	\$252,212	\$113,472
Administrative Analyst	\$80	\$151,184	Sr Administrative Analyst	\$84	\$158,859	-\$7,675
Sr. Configuration Management Analyst	\$87	\$163,368	Sr Configuration Management Analyst	\$84	\$158,858	\$4,510
Lead Inspector	\$199	\$375,302	Sr Construction Inspector (Quality)	\$92	\$172,764	\$202,538
Project Controls Sr.Estimating	\$163	\$306,978	Sr. Cost Estimator	\$110	\$206,981	\$99,998
Social Media/Communications Officer	\$130	\$245,310	Community Relations Officer	\$72	\$136,477	\$108,833
Sr. Environmental Specialist	\$128	\$241,664	Principal Environmental	\$92	\$172,763	\$68,901
Construction Claims Analyst	\$240	\$453,646	Sr. Construction Claims Analyst	\$134	\$252,225	\$201,421
Sr. Contract Administrator	\$173	\$327,550	Sr Contract Administrator	\$100	\$188,661	\$138,888

REGIONAL CONNECTOR PROJECT						
PROJECTED COST OF CMSS/CONSULTANT			METRO			YEARLY COST SAVINGS FY16
POSITION	HOURLY BURDENED RATE CY2016	YEARLY BURDENED SALARY	EQUIVALENT POSITION	HOURLY BURDENED RATE	YEARLY BURDENED SALARY	
Inspector (Senior) Architectural	\$157	\$297,150	Construction Inspector	\$84	\$158,858	\$138,292
Inspector (Senior) Structural	\$157	\$297,150	Construction Inspector	\$84	\$158,858	\$138,292
Inspector (Senior) Electrical	\$151	\$285,710	Construction Inspector	\$84	\$158,858	\$126,852
Inspector (Senior) Mechanical	\$166	\$314,017	Construction Inspector	\$84	\$158,858	\$155,159
Inspector (Senior) Trackwork	\$197	\$371,487	Construction Inspector	\$84	\$158,858	\$212,629
Inspector (Senior) Tunnel	\$157	\$297,150	Construction Inspector	\$84	\$158,858	\$138,292
Construction Manager (Sr.)	\$303	\$571,420	Quality Assurance Manager	\$110	\$206,981	\$364,440
Quality Engineer (Sr.)	\$196	\$369,637	Sr. Quality Engineer	\$92	\$172,764	\$196,873
Construction Inspector (Senior)	\$303	\$571,420	Director, Construction	\$148	\$279,424	\$291,996
Rail Activation Engineer	\$189	\$356,214	Sr Construction Manager	\$134	\$252,212	\$104,001
Social Media/Communications	\$97	\$183,936	Sr.Community Relations Officer	\$84	\$158,859	\$25,077
Social Media/Communications	\$97	\$183,936	Sr. Community Relations Officer	\$84	\$158,859	\$25,077
Social Media/Communications	\$97	\$183,936	Community Relations Officer	\$72	\$136,476	\$47,460
Social Media/Communications	\$97	\$183,936	Community Relations Officer	\$72	\$136,476	\$47,460
Resident Engineer (Sequential Excavation Method)	\$214	\$404,974	Sr Construction Manager	\$134	\$252,212	\$152,761
Resident Engineer (Utility Relocation)	\$221	\$416,952	Sr Construction Manager	\$134	\$252,212	\$164,739
Lead Structural Engineer	\$200	\$377,174	Sr. Structural Engineers	\$143	\$269,456	\$107,718
Lead Tunnel/Geotechnical Engineer	\$154	\$290,701	Sr. Geotechnical Engineers	\$143	\$269,456	\$21,245
Systems Engineer	\$152	\$287,514	Sr. Systems Engineers	\$143	\$269,456	\$18,058
Environmental Compliance	\$143	\$270,851	Sr. Environmental Specialist	\$84	\$158,859	\$111,992
Sr. Contract Admin-	\$162	\$306,965	Sr. Contract Admin	\$100	\$188,655	\$117,410
Sr. Construction Claims Analyst	\$240	\$453,646	Sr. Construction Claims Analyst	\$134	\$252,225	\$201,421
Deputy Director Project Controls	\$230	\$433,988	DEO Project Controls	\$173	\$326,755	\$107,233
Sr. Cost Estimating	\$163	\$306,955	Sr. Cost Estimator	\$110	\$206,980	\$99,975
Configuration Management/Document Control Supervisor	\$97	\$183,370	Configuration Management Supervisor	\$92	\$172,763	\$10,607

**Attachment C-1**  
**CMSS/Consulting Conversion Cost Savings for FY2016-**

CRENSHAW/LAX & SOUTHWESTERN YARD PROJECT						
PROJECTED COST OF CMSS/CONSULTANT			METRO			YEARLY COST SAVINGS FY16
POSITION	HOURLY BURDENED RATE CY2016	YEARLY BURDENED SALARY	EQUIVALENT POSITION	HOURLY BURDENED RATE	YEARLY BURDENED SALARY	
Office Engineer	\$133	\$251,104	Construction Mgr	\$110	\$206,981	\$44,125
Asst-RE	\$245	\$462,560	Sr-Construction Mgr	\$135	\$254,090	\$208,472
Systems RE	\$245	\$462,560	Sr Construction Mgr	\$135	\$254,090	\$208,472
Sr Environmntl Spclst	\$171	\$322,414	Sr Env Specialist	\$84	\$158,858	\$163,557
Sr Quality Engr	\$141	\$266,208	Sr Quality Engineer	\$92	\$172,764	\$93,446
Inspector	\$141	\$266,208	Sr Construction Inspector	\$92	\$172,764	\$93,446
Inspector	\$141	\$266,208	Sr Construction Inspector	\$92	\$172,764	\$93,446
Inspector	\$141	\$266,208	Sr Construction Inspector	\$92	\$172,764	\$93,446
Dir, Construction Mgmt	\$245	\$462,560	Dir Construction Mgmt	\$148	\$280,219	\$182,344
Dir, Construction Mgmt	\$245	\$462,560	Dir-Construction Mgmt	\$148	\$280,219	\$182,344
Office Engineer	\$133	\$251,104	Construction Mgr	\$110	\$206,981	\$44,125
Environmental Support	\$171	\$322,414	Sr-Env Specialist	\$84	\$158,858	\$163,557
Civil/Utility/Structural Inspector	\$141	\$266,208	Sr Construction Inspector	\$92	\$172,764	\$93,446
Structural Engineer	\$139	\$262,432	Sr- Engineer	\$110	\$207,680	\$54,752
OCS Engineer	\$139	\$262,432	Sr- System Engineer	\$110	\$207,680	\$54,752
Signaling Engineer	\$139	\$262,432	Sr- Engineer	\$110	\$207,680	\$54,752
Contract Admnstr Mgr	\$209	\$394,781	Contract Administrator	\$121	\$228,034	\$166,749
Sr Contract Admnstr	\$209	\$394,781	Sr Contract Administrator	\$100	\$188,661	\$206,121
DEO Claims Avoidance	\$287	\$541,856	Deputy Exec Officer	\$171	\$323,302	\$218,557
Sr Project Control Manager	\$156	\$295,335	Sr Project Control Mgr	\$134	\$252,212	\$43,124
Sr Cost Estimator	\$166	\$313,408	Sr Cost Estimator	\$110	\$206,981	\$106,429
Config-Management Supervisor	\$126	\$238,030	Configuration Mgmt Supv	\$92	\$172,764	\$65,267
Sr Community Rels Ofer	\$210	\$396,716	Sr Comm Rel Officer	\$84	\$158,858	\$237,859
Sr Community Rels Ofer	\$210	\$396,716	Sr Comm Rel Officer	\$84	\$158,858	\$237,859

ENVIRONMENTAL COMPLIANCE & SUSTAINABILITY						
PROJECTED COST OF CMSS/CONSULTANT			METRO			YEARLY COST SAVINGS FY16
POSITION	HOURLY BURDENED RATE CY2016	YEARLY BURDENED SALARY	EQUIVALENT POSITION	HOURLY BURDENED RATE	YEARLY BURDENED SALARY	
Principal Environmental Specialist	\$166	\$313,691	Principal Environmental	\$92	\$172,763	\$140,928
Principal Environmental Specialist	\$166	\$313,691	Principal Environmental	\$92	\$172,763	\$140,928
Principal Environmental Specialist	\$166	\$313,691	Principal Environmental	\$92	\$172,763	\$140,928

Note: Total may not add due to rounding.

Summary	Westside Purple Line Extension Section 1 Project	Regional Connector Project	Crenshaw/ LAX & Southwestern Yard Project	Environmental Compliance and Sustainability	Total
<b>Total CMSS/Consulting Conversion to Metro Staff Positions</b>	<b>6</b>	<b>13</b>	<b>11</b>	<b>2</b>	<b>32</b>
<i>In Engineering &amp; Construction</i>	<i>2</i>	<i>8</i>	<i>8</i>	<i>2</i>	<i>20</i>
<i>In Support Departments</i>	<i>4</i>	<i>5</i>	<i>3</i>	<i>0</i>	<i>12</i>
<b>Total CMSS/Consultant Conversion Cost Savings for FY2016</b>	<b>\$725,091</b>	<b>\$1,341,270</b>	<b>\$1,440,084</b>	<b>\$281,856</b>	<b>\$3,788,301</b>

## **APPENDIX 1: STAFFING REQUEST FOR ENVIRONMENTAL COMPLIANCE AND SUSTAINABILITY SERVICES**

### **BACKGROUND**

The Environmental Compliance & Sustainability division (ECSD) provides cross functional environmental, sustainability, and technological support to all of Metro's core business units. ECSD consists of staff credentialed and professionally licensed to oversee environmental clearance, environmental compliance and remediation, energy management, resource conservation, environmental management system, climate change management, and environmental liabilities reduction. The department uses internal staff to manage and oversee services and construction contracts; and requires complementary expertise from consulting firms. This cross functional effort aligns with an integrated approach to producing cost-effective, cost-saving, and technologically advanced and most efficient solutions to environmental regulatory compliance and resource management to achieve procedural and process efficiencies and deliver successful support to accomplish Metro's mission, goals and objectives.

### **ISSUE**

LA Metro has formally incorporated sustainable principles, specifically climate, energy, water and resource conservation and management, into its organizational values and core business goals. These principles express the agency's commitment to "reduce, reuse, and recycle all internal resources and reduce greenhouse gas emissions." Operational and construction-related sustainability principles have been formally implemented throughout our agency since 2007, and have been extensively incorporated into major capital projects as early as 2003. Over the past few years, the number of initiatives and projects related to these themes have significantly increased resulting from new statutes, regulations, and ordinances at all levels of government as well as the increasing mandate from our Board to look for cost-effective ways to plan, construct, operate infrastructure and procure for goods and services. These efforts have resulted in significant cost savings and operational efficiencies (up to \$3M per year), while simultaneously providing fresh sources of potential revenue (from the generation of environmental commodities resulting from these efforts) and increasing the health and welfare of our employees and the people we serve through a safe working and customer focused environment.

As we increase our transit and transportation infrastructure, staff's internal ability to oversee these sustainability-related operational and capital projects become more challenging on two fronts: our ability to properly manage the implementation of the cost-saving and environmentally protective projects as well as our ability to ensure that we develop and implement new ideas to ensure continual improvement.

The number of ECSD staff supporting all of these activities has not grown at a pace required to adequately support and oversee these projects. In the past few years,

consultants were used to supplement efforts through environmental and sustainability related professional services contracts. The existing number of staff is insufficient to address the increasing number of requirements that need to be implemented for the Crenshaw/LAX, Regional Connector, Westside Purple Line Extension Sections 1/2 projects based on current workload factors. As these projects go into full construction, ECSD must meet all current and construction projects needs to reduce our environmental liabilities over the whole life cycle of an asset: that is from planning, design, construction, and operations and maintenance of the project.

While we can continue to use specialized seconded staff through our consultants to execute these time sensitive and board mandated projects, ECSD proposes to instead procure for three new permanent staff to ensure the consistency of project implementation and reduce risk of losing institutional knowledge as Metro continues to implement its growing environmental and sustainability initiatives to ensure statutory and regulatory compliance, organizational resiliency to evolving extreme weather conditions and climate change, and reduce business continuity risk. These will be positions to be assigned at Crenshaw/LAX, Regional Connector, and Westside Purple Line Extension Sections 1/2. A business case outlining in detail the project specific rationale for these positions, as well as other needs of the department were submitted and discussed with the Engineering and Construction Division as well as to the Chair's office in Winter 2015.

## DISCUSSION

Through a series of Board actions since 2007, Metro's environmental and sustainability function is now fully incorporated into the fabric of all of our planning, construction, operations, and procurement business units and significantly positively affects Metro's bottom line. The programs and initiatives have been proven to lower operational costs (currently up to \$3M per year), improve safety, increase quality and efficiency, and enhance our system's overall reputation among our customers, elected officials, and the public. In fact, Metro's environmental and sustainability program has been recognized as the highest environmental and programmatic standard by the American Public Transportation Association and has been cited several times by the Federal Transit Administration as an example program for other transit agencies in the country.

By transitioning consultant support to FTEs, Metro will generate continuing benefits of consistency of project implementation and reduce risk of losing institutional knowledge as Metro continues to implement its growing environmental and sustainability initiatives to ensure statutory and regulatory compliance, organizational resiliency to evolving extreme weather conditions and climate change, and reduce business continuity risk. Procuring for permanent staff increases the pool of skilled staff to build a succession plan for the future.

## ALTERNATIVE

The Board may decide not to approve the transition of consultant functions to Metro staff for ECSD. This is not recommended because it would perpetuate heavy

reliance on consultants, where specialized staff is necessary to execute these time sensitive and board mandated projects, to fulfill critical needs in the areas of environmental compliance and sustainability. The number of staff requested for ECSD is a compromise to ensuring that we achieve both environmental and sustainability goals, reduce our liabilities, and remain sound in achieving our efficiency and cost-savings goals.

**ATTACHMENT A - TRANSITION FROM CMSS/CONSULTANT TO METRO STAFF  
ENVIRONMENTAL COMPLIANCE/SERVICES DEPARTMENT**

<b>Priority</b>	<b>Funding</b>	<b>Position Title</b>	<b>Job Description (currently performed by consultant)</b>	<b>Justification</b>	<b>Required By</b>
1	860228 -- RC, 202211 -- FUEL STORAGE TANK	Principal Environmental Specialist	Assist in the execution of environmental compliance and sustainability-related projects of the Regional Connector Project. Assist in the oversight of the Underground Storage Program.	Regional Connector project is currently supported by full-time consultant to implement environmental, or sustainability related programs in the Regional Connector project. This is a conversion of full-time secured staff to regular Metro staff to reduce overall project delivery cost. Staff will be required (part time) to assist in the implementation of backlogged compliance efforts associated with most recent underground and aboveground storage tank regulations. Loaded per unit labor cost difference between secured consulting staff and equivalent Metro position is up to 350%, depending on position.	1st Q FY16
1	865518 -- WPL1, 865522 -- WPL2, 300012 -- SOIL REMEDICATION and various projects overseen by ECSD	Principal Environmental Specialist	Assist in the execution of environmental compliance and sustainability-related projects of the Purple Line Extension Section 2. Assist in the oversight of the Hazardous Waste Program.	The Purple Line Extension project is supported by full-time consultant to implement environmental, or sustainability related programs in the Purple Line project. This is a conversion of full-time secured staff to regular Metro staff to reduce overall project delivery cost. Staff will be required (part time) to assist in the oversight of hazardous waste program associated with current and new (currently or about to be built) operating facilities programmed to reduce agency environmental liabilities. Loaded per unit labor cost difference between secured consulting staff and equivalent Metro position is up to 350%, depending on position.	1st Q FY16
1	865512 -- C/LAX; 300012 -- SOIL REMEDICATION and various projects overseen by ECSD	Principal Environmental Specialist	Assist in the execution of environmental compliance and sustainability-related projects of the Crenshaw LRT Project. Assist in the oversight of the Metro Environmental Compliance Program.	The Crenshaw project is currently supported by full-time consultant to implement environmental, or sustainability related programs in the Crenshaw LRT project. This is a conversion of full-time secured staff to regular Metro staff to reduce overall project delivery cost. Staff will be required (part time) to assist in the oversight of environmental remediation components of smaller capital projects at our divisions programmed to reduce agency environmental liabilities during construction and operations. Loaded per unit labor cost difference between secured consulting staff and equivalent Metro position is up to 350%, depending on position.	1st Q FY16

## **APPENDIX 2: REQUEST FOR ENGINEERING & CONSTRUCTION CAPITAL PROJECTS STAFFING**

### **BACKGROUND**

In addition to the design, engineering, and construction of the major Measure R rail projects, Engineering and Construction manages a capital program in excess of \$1.0 Billion which is comprised of more than 25 different capital projects, many of which are broken into several separate design and construction contracts. Example projects currently in various stages of design and construction development include the Division 13 Bus Operations and Maintenance (O & M) facility, the Expo Santa Monica O & M facility, the Southwestern Yard O & M facility, the Rosa Parks Station improvements, Patsaouras Plaza Busway Station, the Emergency Security Operations Center (ESOC), and Soundwall projects. Additionally, the capital support departments provide management and coordination of all joint development projects at Metro stations, engineering support and design work for Facilities Maintenance and General Services at our facilities and headquarters, and technical support for sustainability projects, highway projects, and regional rail.

### **ISSUE**

The work effort for the capital projects which includes design, engineering, and construction management is done primarily by in-house staff. For larger and more complicated design projects, the services of design consultants are retained. When engineering assistance is needed to supplement staff or specific engineering capabilities are required, a task order contract with Maintenance Design Group is initiated. This contract is used for engineering task orders that are project-based, and may not be used to supplement or second Metro engineering staff.

For construction management (CM) Marris, Inc. and Jackie Patterson Engineering (both SBE's) provide CM services when required. Currently, Marris and JL Patterson are used to support the Division 13, Patsaouras Plaza, the North Hollywood Pedestrian Underpass, and the Universal City Pedestrian Bridge. These contracts are set to expire this year, and will be re-procured competitively to have on-call CM assistance when required.

Due to the expanding workload, new FY16 capital projects, and the number of new building projects such as the Rosa Parks Station and the AMC, the departments supporting the capital projects are currently short on resources and new resources are required to meet the goals and objectives of the departments. Also, interdepartmental resources have been reallocated from the capital projects resources to make sure the major rail projects have adequate management oversight. Therefore, existing staff is



not sufficient based on the current workload to efficiently and effectively implement the work effort.

The resource allocation of staff for Capital Projects has not grown at a pace required to adequately support and oversee the engineering and construction of the dynamic and expanding capital program. This situation has created an over dependency on costly consultants to provide technical support.

## DISCUSSION

Engineering and Construction is requesting three (3) additional positions to support the Capital Projects Program. Additional support staff is integral to the success of the Capital Program and new resources are required to meet the goals and objectives of the Division. In order to meet the challenges of the work effort, continue providing high-level and accurate construction and engineering support, and complete work within the schedules required, it is imperative that we increase our Capital Projects support staff as follows:

No.	Position Title
1	Director, Construction Management
2	Sr. Construction Managers
1	Sr. Engineering Manager
1	Sr. Engineer
1	Supervising Engineer
<b>6-3</b>	<b>Total</b>

## ALTERNATIVE

The Board may decide not to approve the request for additional resources to support the Capital Projects Program. This is not recommended since history has proven that not having proper oversight on any project causes disruptions in the project development with a loss of potential cost savings of \$3.1 million. It is critical that additional resources be added to facilitate the effective and efficient engineering and construction of the projects.

**APPENDIX 2 – ENGINEERING & CONSTRUCTION  
FY16 FTE Request for Capital Projects Support Staff**

No. FTE	Cost Center	Project No.	Position Title	Job Description	Justification	QTR Needed
1	8410	204071 -- MBL_REFUR, 205063 -- MBL PEDESTRIAN , 211005 -- MBL Signal System, 460323&460324 -- Soundwall	Director of Construction Management	<b>Director of Construction Managers:</b> This position develops and Implement polices and procedures for planning. Organizing, coordinating and controlling major Capital construction projects as well as large number of smaller projects. Plans and assigns work to subordinates, ensures that assignments are being accomplished and that Metro and Contractor staffs are following appropriate policies, plans and specifications. One (1) position is requested. The position will support Minor Capital Projects in support of the Rail Facilities Improvements, Rail Rehabilitation Projects, and Wayside Systems Projects, specifically Metro Blue Line Refurbishments, Blue Line Signal System Rehabilitation, and Pedestrian Swing Gates projects.	Construction Management Department does not have the personnel to assign to these activities at this point in time. Metro does not want to use consultants at this time due to the higher cost of consultants.	Q1
2	8410	<del>204071 -- MBL_REFUR, 205063 -- MBL PEDESTRIAN , 211005 -- MBL Signal System, 460323&amp;460324 -- Soundwall</del>	<del>Senior Construction Manager</del>	<del><b>Senior Construction Managers:</b> This position oversees and manages rail facilities construction projects and ensures work is done according to specifications, within schedule and within budget. One position is requested. The position will support Minor Capital Projects in support of the Rail Facilities Improvements, Rail Rehabilitation Projects and Wayside Systems Projects, specifically Metro Blue Line Refurbishments, Blue Line Signal System Rehabilitation, and Pedestrian Swing Gates projects.</del>	<del>Construction Management Department does not have the personnel to assign to these activities at this point in time. Metro does not want to use consultants at this time due to the higher cost of consultants.</del>	<del>Q1</del>
1	8380	202317 -- PATSAOURAS, 202324 -- Div 1, 460303 -- Green Line, 405555 --ROSA PARKS	Sr Engineer Manager (Structural))	This is an engineering position required to provide design and construction support services for the Rail and Bus Facilities Capital Program. The specific engineering discipline required is a Senior Structural Engineer. The senior engineer duties will include design and engineering of structures for bus and rail facility projects, including all building projects. In addition, the position will manage design and engineering work conducted by outside design professionals, and will also support active construction projects with structural engineering requirements. The position will also support the design of the Rosa Parks and Airport Metro Connector (AMC) projects for the Planning Department, which was not previously budgeted.	There is currently no position available in the department to support the structural building projects and upcoming work related to the Airport Metro Connector (AMC) and Rosa Parks Station projects. This position is required to provide efficient, timely, and high quality engineering services for the \$550 million facilities program portfolio.	Q1

**APPENDIX 2 – ENGINEERING & CONSTRUCTION  
FY16 FTE Request for Capital Projects Support Staff**

No. FTE	Cost Center	Project No.	Position Title	Job Description	Justification	QTR Needed
1	8320	860228 – RC, 865518 – WPL1, 865522 – WPL2	Supervising Engineer (Mechanical ventilation)	To supervise structural items on the Regional and Purple Line Extension Sections 1 and 3 Projects and support upper management on miscellaneous Metro-Operation tasks.	The Regional Connector and Purple Line Extension Section 1 and 2 projects have several structural elements that would require structural engineering reviews. Metro Engineering is expecting to receive a very large number of submittals that require our review. With the Design Builder already on board on two of these projects and their aggressive schedule to start construction in the summer, a new position is needed in order to assist the project in review of the structural items on these projects.	Q1
1	8010	212121 -- EOC/ROC/BOC	SR. ENGINEER	Project Management support for major capital projects for the Operations Control Center and others, as required. Duties include performing project management support and technical and administrative functions such as overseeing & administering design, procurement, construction and installation of rail and bus facilities and systems; Development of scope of work; Administers and monitors work and contract for compliance with schedule and budget; Evaluation of design proposals, bids & change orders; Conducting field & technical investigations; Manage engineering activities to ensure compliance with design criteria and applicable codes; Interface and coordinates with various Metro depts. and other agencies; and facilitates resolution of design, construction and operational issues.	The OCC Project estimated at over \$125 million is a significant and very complex project entailing integration of the Rail Operations Center (ROC), Bus Operations Center (BOC) and Emergency Operations Center (EOC) functions into a single facility to facilitate a more efficient and coordinated response to normal traffic activities and special events, as well as unexpected emergencies.	Q2

## **APPENDIX 3: STAFFING REQUEST FOR THE PROGRAM MANAGEMENT OFFICE (PMO)**

### **BACKGROUND**

The Program Management Office (PMO), created by the Board in September 2010, primarily in response to voter-approved Measure R, provides oversight on Measure R and other on-going projects agency-wide. The PMO is responsible for project controls and oversight, cost estimating, configuration management, and program control management agency-wide. These functions are critical to the successful delivery of the Measure R program. When managed successfully, PMO can help lower project cost, prevent and mitigate project budget cost overrun and schedule delays.

### **ISSUE**

Since 2010 the number of Metro staff in the PMO has not grown at a pace that is required to adequately support and oversee the fast-growing transit construction and capital program at Metro. In effort to meet project needs, consultants have been brought in to supplement PMO staff to fulfill project controls and oversight, cost estimation, and configuration management functions. To increase greater project controls and to maintain continuous oversight of the Measure R program, staff recommends transitioning four (4) positions (1 Crenshaw/LAX, 2 Regional Connector, and 1 Westside Purple Line Extension Section 1) to Metro equivalent staff positions. See Attachment 3-A for job description and justification detailed for each proposed Metro staffing position.

### **DISCUSSION**

In addition to effecting cost savings, staff has determined by transitioning certain consultant functions in-house to new Metro staff may generate other potential benefits, including, 1) decrease reliance on consultants will increase Metro's control of its project; and 2) increase a pool of skilled work force to build a succession plan for the future. Transition to Metro staff positions on the Regional Connector and Westside Purple Line Extension Section 2 Project will directly address the FTA and their Project Management Oversight Contractor's (PMOC) concerns of Metro not having adequate staff for the effort required for Regional Connector and Westside Purple Line Extension Section 1 projects. Also, approval of staffing request will allow Metro to add developed human capital to the Metro's work force to maintain continuity of technical expertise and knowledge on the project.

**ATTACHMENT 3A - DESCRIPTION & JUSTIFICATION BY METRO STAFF POSITION  
PROGRAM MANAGEMENT OFFICE (PMO) DEPARTMENT**

**ALTERNATIVE**

The Board may decide not to approve the transition of consultant functions to Metro staff for the Program Management Office (PMO). This is not recommended because it would perpetuate heavy reliance on consultants to fulfill critical project controls and oversight, cost estimating, and configuration management required to support the major transit construction program. Positions continued to be filled by existing consultants instead of Metro staff positions will present a greater cost to the projects, Metro, and public tax payers.

**ATTACHMENT 3A - DESCRIPTION & JUSTIFICATION BY METRO STAFF POSITION  
PROGRAM MANAGEMENT OFFICE (PMO) DEPARTMENT**

<b>Priority</b>	<b>Funding</b>	<b>Position Title</b>	<b>Job Description</b>	<b>Justification</b>	<b>Required by</b>
1	860228 Regional Connector	Deputy Executive Officer, Program Management	Deputy Executive Officer, Program Management provides direction for managing project budgets, schedules and project risks on the Regional Connector Project. This position ensures that the project management team interfaces effectively with Countywide Planning and Development (including Real Estate), Procurement, Operations and various departments with Engineering and Construction to establish and adhere to project budget and schedule.	Deputy Executive Officer, Program Management position is critical delivering the Regional Connector project on-time and within budget. Approval of a FTE position will allow elimination and transition of this function from a consultant to a Metro FTE assigned to the project. If this position is not approved, Metro must continue to retain a consultant to fulfill the responsibilities at greater cost. Creation of this position addresses the FTA and their PMOC's concerns of Metro not having adequate staff for the effort required for the Regional Connector project.	July 2015
2	860228 Regional Connector	Configuration Management Supervisor	Configuration Management Supervisor oversees, supervises, trains Configuration Management Analysts, supports related database systems and technical system support, and coordinates document and change control activities required on the Regional Connector Project. This position manages the processing of contractual documentation regarding request for information, change notices, contract modifications, submittals, drawings, claims, and project correspondence for compliance with laws, regulations and requirements.	Configuration Management Supervisor is critical to ensure the document control role and change control function is fulfilled on the Regional Connector Project. Approval of a FTE position will allow elimination and transition of this function from a consultant to a Metro FTE assigned to the project. If this FTE position is not approved, Metro must retain a consultant to perform this work at a greater cost. Creation of this position addresses the FTA and their PMOC's concerns of Metro not having adequate staff for the effort required for the Regional Connector project.	July 2015
3	865518 Westside Purple Line Section 1	Senior Configuration Management Analyst	Senior Configuration Management Analyst supports related database systems and technical system support, and coordinates document and change control activities required on the Westside Purple Line Extension Section 1 Project. This position manages the processing of contractual documentation regarding request for information, change notices, contract modifications, submittals, drawings, claims, and project correspondence for compliance with laws, regulations and requirements.	Senior Configuration Management Analyst is critical to ensure document control and change control functions are fulfilled on the Westside Purple Line Extension Section 1 Project. Approval of a FTE position will allow elimination and transition of this function from a consultant to a Metro FTE assigned to the project. If this position is not approved, Metro must retain a consultant to perform this work at a greater cost to the project. Creation of this position addresses the FTA and their PMOC's concerns of Metro not having adequate staff for the effort required for the project.	July 2015

**ATTACHMENT 3A - DESCRIPTION & JUSTIFICATION BY METRO STAFF POSITION  
PROGRAM MANAGEMENT OFFICE (PMO) DEPARTMENT**

<b>Priority</b>	<b>Funding</b>	<b>Position Title</b>	<b>Job Description</b>	<b>Justification</b>	<b>Required by</b>
4	865512 Crenshaw/ LAX	Senior Project Control Manager	Senior Project Control Manager develops and oversees all budgeting, schedule development and performance measurement, cost management and control, and reporting activities required on the Crenshaw/LAX Transit Project. This position is required to maintain the life-of-project budget and manage the master schedule.	Senior Project Control Manager is critical to the project control and oversight responsibilities on the Crenshaw/LAX project. Approval of a FTE position will allow for elimination and transition of this function from a consultant to a Metro FTE assigned to the project. If this position is not approved, Metro must retain a consultant to perform this work at a greater cost.	August 2015

**APPENDIX 4: STAFFING REQUEST FOR VENDOR/CONTRACT MANAGEMENT****BACKGROUND**

The Vendor/Contract Management (V/CM) Department provides cross function administrative and technological support to Metro's core business units. V/CM comprised of the Diversity and Economic Opportunity, Procurement, Supply Chain Management, Administration and Policy and Project Management organized as functional units with integrated processes to achieve procedural and process efficiencies and deliver successful support to accomplish Metro's mission, goals and objectives.

**ISSUE**

The successful delivery of the voter approved Measure R program is highly dependent on a strong V/CM team that utilizes industry-best practices to fulfill Metro's Mission as the agency responsible for the continuous improvement of an efficient and effective transportation system for Los Angeles County.

The number of V/CM staff supporting Engineering and Construction has not grown at a pace required to adequately support and oversee the rapidly developing transit construction and capital program. Therefore, existing staff is not sufficient for the Crenshaw/LAX, Regional Connector and Westside Purple Line Extension Section 1 projects based on current workload factors. To meet project needs, the Projects have utilized consultants to supplement V/CM in the areas of contract administration management and senior contract administration. However, specialized staff is necessary to execute these time sensitive and board mandated project in order to increase continuity of the process and prevent risk. In an effort to remedy the current shortage of V/CM staff support, three Senior Contract Administrator positions and one Contract Administration Manager position, with the possibility of reclassifying any of these positions to create Claims Avoidance Specialists for Crenshaw/LAX, Regional Connector and Westside Purple Line Extension Section 1, were submitted and discussed with the Engineering and Construction department. They have acknowledged their need of this support and included the positions in their staffing plans for FY16.

**DISCUSSION**

The procurement function and contract management is an important factor for Metro's bottom line. When managed successfully, it can lower costs, improve safety, increase quality and efficiency, and enhance our system's overall reputation among our customers, elected officials, and the public. In addition, by transitioning consultant to FTEs Metro may generate other potential benefits such as continuity within the process, prevention of risk of disruption for our customer and an increase in the pool of skilled staff to build a succession plan for the future.



## ALTERNATIVE

The Board may decide not to approve the transition of consultant functions to Metro staff for V/CM. This is not recommended because it would perpetuate heavy reliance on consultants, where specialized staff is necessary to execute these time sensitive and board mandated projects, to fulfill critical needs in the areas of acquisition planning, coordination of pre-award actions to produce executable contracts, price and cost analysis, value engineering review, contract price negotiations and claims management, change order processing, post-award contract administration, and contract close-out.

**ATTACHMENT 4A - TRANSITION FROM CMSS/CONSULTANT TO METRO STAFF  
VENDOR/CONTRACT MANAGEMENT (V/CM) DEPARTMENT**

<b>Priority</b>	<b>Funding</b>	<b>Position Title</b>	<b>Job Description (currently performed by consultant)</b>	<b>Justification</b>	<b>Required By</b>
1	Crenshaw/LAX (1 FTEs) Westside PLE section 1 (2 FTE)	Sr. Contract Administrator	The Sr. CA is responsible for the efficient and effective acquisition of goods and services in support of assigned clients. The Sr. CA leads a Contract Administration Team that supports assigned client departments, and performs senior level, complex procurements for major projects and services to ensure timely, efficient support in compliance with Authority, local, state, and federal laws, rules and regulations. Prepares and reviews solicitation documents, evaluates bid results, chairs source selection committees, establishes and enforces evaluation criteria, sets schedules, and makes award recommendation on contract procurements. Selects vendors, obtains and compares price quotations, completes cost/price analysis process, negotiates price, terms and conditions. Evaluates contractor performance to determine compliance with contract obligations. SR CA works with contractor and client department to ensure timely contract completion and/or renewal; timely submission of scopes, technical descriptions, Board reports, and the submission of work product specified in the contract. Responds to award protests and holds debriefings with unsuccessful proposers. Completes final draft of contract documents, negotiates change orders and amendments. Prepares Board reports for contract approval. Prepares status reports, summaries and correspondence.	Positions will support projects in the areas of Crenshaw/LAX, and Westside/Purple Line Extension 1. These positions were submitted and discussed with the Engineering and Construction Dept. and they have acknowledged their need of this support and included in their staffing plans for FY16. Specialized staff is needed to execute these time sensitive and board mandated projects. Existing staff is not sufficient for these types of projects based on current workload factors.	1st Q FY16
1	Crenshaw/LAX (1 FTE)	Contract Administration Manager	The Contract Administration Managers oversee Contract Administration staff in the development, negotiation, and administration of contracts in support of the administrative services clients. Ensures that resources are adequately allocated for the client's support. Ensures compliance with the rules and regulations, policies and procedures of the authority, local, state, and federal governments. Oversees the preparation and analysis of RFP's, IFB's, RFIQ's, amendments, change orders, and task orders. Plans, directs and communicates work requirements and schedules to provide timely, efficient service to client departments. Prepares and issues reports regarding the technical and project specific contract matters to management.	The position will support the Crenshaw/LAX project. The position was submitted and discussed with the Engineering and Construction Dept. and they have acknowledged their need of this support and included in their staffing plans for FY16. Specialized staff is needed to execute these time sensitive and board mandated projects. Existing staff is not sufficient for these types of projects based on current workload factors.	1st Q FY16

## APPENDIX 5: FY16 STAFFING REQUEST FOR THE CONSTRUCTION RELATIONS TEAM

### **Background**

In April 2013, the Metro Board of Directors approved Metro's Construction Relations Model as the standard program in support of construction outreach and mitigation for all transit projects. This established the agency's commitment to implement those mitigation measures identified in the Final Environmental Impact Statement and Final Environmental Impact Report for each project. The adopted standards set clear guidelines for managing public expectations for the scope and breadth of project activities that may be conducted to address the rigors and impacts of construction as the projects proceed. It also sets a standard for extensive public engagement and outreach during Metro construction projects.

Construction Relations, a unit within the Community Relations Department, leads the public outreach, stakeholders' communication and construction impact coordination and mitigation on all major capital projects. Construction Relations is responsible for the liaison function to the community, project team and intra-departmental coordination with other communications departments such as public relations, design and marketing. The Construction Relations team's goals are consistent with the Project Management Plan and adopted environmental mitigations as submitted to the FTA in exchange for project funding.

As a member of the Project Management Team, Construction Relations advises the Project Director on communications and outreach strategies and provides oversight on intradepartmental communications for external messaging that includes approval and production of material that aligns with the agency's communications protocols.

#### *Construction Relations Expands with Focus on Small Businesses*

Over the last year, the Construction Relations program has grown to include a focused effort to support the small business community, whether through the facilitation of small business resources to the Business Solutions Center and Business Interruption Fund or the Eat, Shop, Play Local campaign.

Metro's Eat, Shop, Play Local campaign brings focused attention to project area businesses impacted by construction of the agency's multi-billion dollar transit projects. The goal of the campaign is to encourage the public to Eat at local restaurants, Shop at local retail stores and Play at local destinations, during and after construction. Participation is free to businesses and customers are incentivized to "take the pledge" to Eat, Shop and Play Local. This project is showing results and is being recognized as an emerging case study for other construction mitigation programs. Construction Relations has been selected as one of three top finalists (out of 99 total nominations) for the *California Transportation Foundation Award* - Public Outreach Program of the Year for the Eat, Shop, Play

APPENDIX 5: FY16 STAFFING REQUEST FOR THE CONSTRUCTION RELATIONS TEAM Crenshaw campaign. Honolulu Transit Rail is in the process of kicking off their own Eat, Shop, Play Local program modeled after Metro's.

*Construction Relations Staffing Through the Years*

Given that Metro has construction projects in the pipeline for at least the next 23 years through Measure R, it is important to have a strategy for retaining institutional knowledge, building in-house

capacity for a trained and experienced workforce, have a succession plan in place and maintain claims records. On the Metro Gold Line Eastside Extension, staff files related to claims and construction mitigation served the agency to build its defense on many litigations, saving the agency millions of dollars.

The Construction Relations team in place now embraces that strategy. Over half of the Construction Relations team has Metro major capital project experience, setting in motion the department's trained and experienced workforce. Of these, over half of the existing team has been converted from seconded consultants to Metro FTEs and one has promoted from Entry Level Trainee to Construction Relations Assistant ensuring succession planning remains a department priority.

The FY16 staffing requested through this Board Report will complete the teams required for Metro's current transit construction projects: Crenshaw/LAX Transit Project, Purple Line Extension (Section 1) and Regional Connector.

Project staffing has been achieved by varying scenarios over the years. During construction of the Metro Gold Line Eastside Extension, the Construction Relations Team was completely comprised of Metro FTEs. When Metro started construction on the Metro Orange Line, hourly consultants were hired to supplement the limited Construction Relations staff because additional Metro FTEs could not be obtained. After the Internal Revenue Service (IRS) ruled that Metro could no longer hire hourly consultants, Construction Relations sought to hire its staff through the Construction Management Support Services Contract (CMSSC) in the same way that Engineering and Construction brought staff on for Metro's major capital projects.

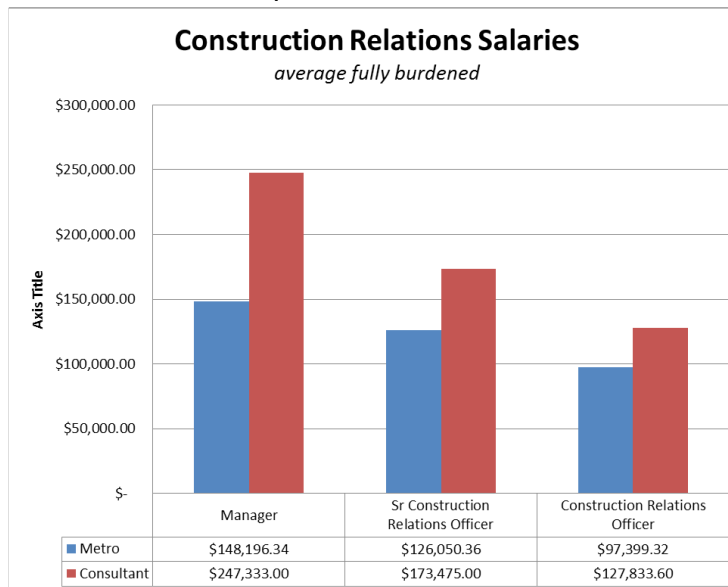
Construction Relations started hiring staff through the CMSSC beginning with construction of the Metro Orange Line Extension and the I-405 Sepulveda Pass Improvements Project. In FY15, 16 FTEs were requested and only four were approved. The remaining 12 positions were hired through the CMSSC for the Crenshaw/LAX Transit Project, Purple Line Extension Section 1 and Regional Connector.

APPENDIX 5: FY16 STAFFING REQUEST FOR THE CONSTRUCTION RELATIONS TEAM  
 Design builders have now been retained on all of the projects. Advanced utility relocation has been underway for over a year and design is nearing its final stage. The Crenshaw/LAX Transit Project is the most advanced with major construction at three underground stations well underway. The Purple Line Extension and Regional Connector will begin soldier pile installation followed by excavation and decking during the early part of FY16. As the construction work ramps up, the Construction Relations teams have to be adequately staffed in order to carry out the public outreach and construction mitigation program the Metro Board adopted as its standard in April 2013.

**Issue**

Management has reviewed the staffing needs and recently conducted a review comparing the cost associated with hiring through the CMSSC versus hiring Metro FTEs, and also weighed the benefits of both. The results of staff’s evaluation showed that utilizing consultants netted a higher cost to the

agency by as much as 15 to 40%. As custodians of public funds, staff believes it is their responsibility to ensure a cost effective and benefit enhanced approach to hiring staff. Therefore, we are seeking to convert 4 7 seconded consultant positions to Metro FTEs in FY16. (See comparison chart)



**Discussion**

In addition to effective cost savings staff has determined that by transitioning certain consultant functions in-house to new Metro staff, it will support the agency’s strategy to: 1) build-in house capacity, 2) maintain a trained and experienced workforce, 3) have a succession plan in place, 4) maintain institutional knowledge; and 5) decrease reliance on consultants.

## APPENDIX 5: FY16 STAFFING REQUEST FOR THE CONSTRUCTION RELATIONS TEAM

Transition of Metro staff positions on the Crenshaw/LAX Transit Project, Purple Line Extension Section 1 ~~and 2~~ and Regional Connector will directly address the commitments made in the FTAs Project Management Plan and the adopted environmental documents for each of the projects.

Construction is in full swing on all of the projects and has ramped up significantly from the current fiscal year. In order to meet the Board's expectations for the full implementation of the adopted standard, and to ensure continued public outreach, stakeholder communication and construction impact coordination and mitigation as has become an expectation of our external customers, Construction Relations needs approval for ~~7~~ 4 FTEs through this board action to fully staff the Construction Relations teams on the three active transit projects under construction.

**Alternative**

The Board may decide not to approve the conversion of seconded consultants to Metro FTEs for Construction Relations. This is not recommended because it would continue its high reliance on consultants to fulfill the Board's adopted standard for public outreach on major capital projects at substantially higher costs, without a mechanism for developing in-house capacity, a trained and experienced workforce, succession planning and maintaining institutional knowledge.

APPENDIX 5: FY16 STAFFING REQUEST FOR THE CONSTRUCTION RELATIONS TEAM

**Attachment 5A - Conversion from CMSSC Seconded Consultants to Metro FTEs  
Construction Relations Team**

Conversion from Seconded/Consultants to Metro FTE					
Priority	Funding	Position Title	Job Description (currently performed by consultant)	Justification	Required By
Project Critical	Crenshaw/ LAX Transit- Project	<del>1 Sr. Construction- Relations Officer— Social Media</del>	<del>Responsible for all- visual communications- and new media- outreach for- construction, community engagement and small business- support efforts.— Coordinator of all media- assets including media- buys, webpage updates, widget development for third party partners, collateral materials and video development.— Responsible for internal- coordination of messaging and external- communications with- Media Relations, Marketing and Metro- Design Studio.</del>	<del>Without this position, the project team would be unable to sustain- current levels of- responsiveness to- community concerns- and complaints. It would be virtually- impossible to reach- commuters as they are missed altogether- through traditional- outreach.—</del>	<del>July 1, 2015</del>
Project Critical	Crenshaw/ LAX Transit- Project	<del>1 Sr. Construction- Relations Officer— alignment wide</del>	<del>Responsible for- supporting the segment- leads on all facets of- public outreach and- leads the effort to- document and facilitate- all property damage- complaints on the- project; answers,</del>	<del>Without this position, the project team would be unable to sustain- current levels of- responsiveness to- community concerns- and complaints and would no means for- ensuring institution</del>	<del>July 1, 2015</del>



**Attachment 5A - Conversion from CMSSC Seconded Consultants to Metro FTEs  
Construction Relations Team**

			<p>responds to and resolves all complaints that come in to the project hotline and dedicated email; assists with business recruitment for Eat, Shop, Play Local campaign and coordinates disruption of service for 3<sup>rd</sup> party utility interruptions. Leads documentation of project issues, maintains the 90 day look ahead calendar and handles public meeting logistics.</p>	<p>knowledge is kept through the exceptional management of project (complaints) records.</p>	
Project Critical	Purple Line Extension - Section 1	1 Sr. Construction Relations Officer — <u>Social Media-Alignment-Wide</u>	<p><u>Responsible for supporting the segment leads on all facets of public outreach and leads the effort to document and facilitate all property damage complaints on the project; answers, responds to and resolves all complaints that come in to the project hotline and dedicated email; assists with business recruitment for Eat, Shop, Play Local campaign and</u></p>	<p><u>Without this position, the project team would be unable to sustain current levels of responsiveness to community concerns and complaints and provide the close coordination needed to address complaints between stakeholder and the contractor. Without this position, the project team would be unable to sustain current levels of responsiveness to community concerns</u></p>	July 1, 2015

**Attachment 5A - Conversion from CMSSC Seconded Consultants to Metro FTEs  
Construction Relations Team**

			<p><u>coordinates disruption of service for 3<sup>rd</sup> party utility interruptions.</u>  <u>Leads documentation of project issues,</u>  <u>maintains the 90-day look-ahead calendar and handles public meeting logistics.</u> Responsible for all visual communications and new media outreach for construction, community engagement and small business support efforts.          Coordinator of all media assets including media buys, webpage updates, widget development for third party partners and collateral material.          Responsible for internal coordination of messaging and external communications with Media Relations, Marketing and Metro Design Studio.</p>	<p>and complaints. It would be virtually impossible to reach commuters as they are missed altogether through traditional outreach.</p>	
Project Critical	Regional Connector	1 Construction Relations Manager - CLC	Responsible for facilitation of all activities related to the Community Leadership Council and lead for community engagement and	Without this position, the project team would be unable to sustain current levels of responsiveness to community concerns and complaints and	July 1, 2015

**Attachment 5A - Conversion from CMSSC Seconded Consultants to Metro FTEs  
Construction Relations Team**

			development/implementation for all community related mitigation measures adopted through the environmental process.	provide the close coordination needed to address complaints between stakeholder and the contractor.	
Project Critical	Regional Connector	1 Sr. Construction Relations Officer - <u>ea</u> Western <u>s</u> Segment	Responsible for the implementation of the Board Adopted Standard Construction Relations program for a specific segment. Is lead on strategy, development and implementation for public outreach, stakeholder communications and construction impact coordination and mitigation for the specific segment.	Without this position, the project team would be unable to sustain current levels of responsiveness to community concerns and complaints and provide the close coordination needed to address complaints between stakeholder and the contractor.	July 1, 2015
Project Critical	Regional Connector	1 Sr. Construction Relations Officer - Social Media	Responsible for all visual communications and new media outreach for construction, community engagement and small business support efforts. Coordinator of all media assets including media buys, webpage updates, widget development for third party partners and collateral material. Responsible for internal	Without this position, the project team would be unable to sustain current levels of responsiveness to community concerns and complaints. It would be virtually impossible to reach commuters as they are missed altogether through traditional outreach.	July 1, 2015

**Attachment 5A - Conversion from CMSSC Seconded Consultants to Metro FTEs  
Construction Relations Team**

			coordination of messaging and external communications with Media Relations, Marketing and Metro Design Studio.		
Project Critical	Regional Connector	1 Construction Relations Officer - alignment-wide	Responsible for supporting the segment leads on all facets of public outreach and leads the effort to document and facilitate all property damage complaints on the project; answers, responds to and resolves all complaints that come in to the project hotline and dedicated email; assists with business recruitment for Eat, Shop, Play Local campaign and coordinates disruption of service for 3 <sup>rd</sup> party utility interruptions. Leads documentation of project issues, maintains the 90-day look-ahead calendar and handles public meeting logistics.	Without this position, the project team would be unable to sustain current levels of responsiveness to community concerns and complaints and would no means for ensuring institution knowledge is kept through the exceptional management of project (complaints) records.	July 1, 2015

## **~~APPENDIX 6-1: STAFFING REQUEST FOR REAL ESTATE DEPARTMENT TO SUPPORT CONSTRUCTION PROJECTS~~**

### ~~BACKGROUND~~

~~Most of the Capital engineering and construction projects have adopted an integrated project management team approach for the management of the overall project. The Real Estate Department is an integral part of the team and is responsible for the overall management, implementation, administration, reporting and liaison related to the appraisal, acquisition and relocation processes required to meet the real estate requirements for each Project.~~

~~The Real Estate Department is expected to deliver the required real estate for major rail bus and administrative projects. The Project's Engineering Design Team provides a definition of the real property required for the Project. The deliverable to Real Estate is a set of ROW plans that show the location and extent of properties to be acquired in fee as well as the location and types of proposed easements.~~

~~Implementation of the acquisition program is closely coordinated with the activities of the Project as a whole. Real Estate attends regular project overview meetings that are led by the Project Manager and include representatives from all of the project disciplines. The Project is likely to establish bi-monthly meetings which will be held with the project team to discuss the status of certifications and the acquisition schedule. These meetings include Project's third party coordinator, the right of way engineering consultant, real estate staff and the project manager. Close coordination and early identification of problem parcels serve to assure the availability of parcels when needed. Real Estate staff also coordinates closely with the design team to precisely determine the right of way needs and to provide input into certifications with oversight from the Project Manager.~~

~~In addition, the Real Estate management staff works closely with the project controls staff. The real estate staff provides regular updates to cost estimates, report on budget variances, identifies need and forecast dates for the project schedule, and provides regular status reports. The project controls staff develops detailed schedules, tracking procedures and management reports based on the preliminary schedules and data created by real estate staff.~~

~~Full takes, part takes, permanent easements (including subsurface easements), and temporary construction easements (TCEs) are identified. The Real Estate staff works closely with the Project Team to continuously evaluate all proposed acquisitions. Periodic meeting to review the Real Estate Program are held to review the status of the acquisition program and to review any required changes to the acquisition schedule or the identified parcels.~~

### ~~ISSUE~~

The Real Estate Department is currently actively implementing the Real Estate Acquisition Program for the following Projects :

1. Crenshaw LAX Project
2. Regional Connector Project
3. Purple Line Westside Extension — Section 1
4. Purple Line Westside Extension — Section 2

The initial workload for the Crenshaw, Regional and Westside — Section 1 projects totaled over 300 parcels. During the height of the workload, the in-house staff was supplemented by outside consultants which provided the resources to complete the work in a timely manner. The remaining workload is approximately 40 parcels plus 35 new parcels included in the Purple Line Westside Extension — Section 2. The existing staff involved in the acquisition program will take on all responsibilities for appraisal review, negotiations, oversight of relocations consultant. Staff will be supplemented by professional consultants to handle the relocation workload.

Real estate services is expected to commence work on the following identified projects :

1. 96th Street Station
2. SCIP Project

#### New Staffing Requirements

The Real Estate Department currently has 19 authorized positions. Of the 19, nine (9) are exclusively allocated to work associated with delivering parcels for the active Projects. The total allocation of FTE's is spread over all of the positions that are assigned to work on a particular project.

One (1) additional Senior Real Estate Officer is requested to be assigned for the acquisition program to bring the total FTE's available exclusively for the remaining acquisition program to 10. The additional workload for the Westside Section 2 and the SCRIP program will require additional staff with acquisition/negotiations, and relocation experience. Additional personnel will assure that the acquisition schedule can be maintained and permits the Management/Administrative staff additional time to efficiently manage the program and to devote time to the parcels requiring intensive negotiations.

See Attachment 6-1A for the job description and justification for this position.

#### Breakdown of Real Estate Staff

Management/Administrative	3
Property Management	8
Acquisition/Relocation	10
— Total	20

### Consultant Services

~~In addition to internal staff, Real Estate will continue to require the services of consultant to perform services in the areas of appraisal, environmental investigation, title reports, and relocation services. The Real Estate consultant services bench is the source of consultants to perform these services.~~

### ALTERNATIVE

~~If the additional position is not authorized, the delivery of parcels on schedule may be impacted. The existing staff will be used for all acquisition activities; consultant services are used to implement relocation of occupants. The use of consultant services for acquisition is *not* recommended due to the policy issues involved in negotiating an acquisition settlement.~~





**ATTACHMENT 6-1A – REAL ESTATE (Cost Center 6510)**

Funding	Position Title	Job Description	Justification	Required by
865522 & 865518	Sr. Real Estate Officer	Negotiate acquisitions; initiate condemnation cases; oversee the relocation of tenants; coordinate interface with Project staff	The Purple Line Project, Section 2 will add approximately 35 new parcels to the Real Estate workload. The current staff is already at capacity with the work required to complete the Regional Connector, Crenshaw LAX Project, and Westside Section 1 projects. The additional staff will provide the additional staffing needed to maintain the construction schedule	July 2015

## **APPENDIX 6-2: STAFFING REQUEST FOR SIGNAGE AND ENVIRONMENTAL GRAPHIC DESIGN TO SUPPORT CRENSHAW/LAX, REGIONAL CONNECTOR, AND PURPLE LINE EXTENSION CONSTRUCTION PROJECTS**

### BACKGROUND

The Signage and Environmental Graphic Design unit improves customer navigation and environmental graphic design consistency through the development of essential systemwide signage and wayfinding design standards and guidelines. The unit staff is at capacity responding to day to day requests for new signage and backlog of required modifications at the existing 100 plus operating stations (including the 13 new stations opening next year) and multiple vehicle types resulting from new safety, security, gating, fare enforcement, code of conduct, Civil Rights/ADA updates and other growing and ongoing operational needs.

The 2010 Measure R Strategic Advisor Report cited “one of the largest capital improvement programs ever undertaken by a single transportation agency in the US [and] an unprecedented challenge for project delivery” and called for the agency "to significantly increase the capacity and improve skill sets throughout construction functions...and allocate resources to improving wayfinding/signage."

In order to adequately meet the demands of the Crenshaw/LAX, Regional Connector, and Purple Line Extension, while also meeting increasing agency operational needs not related to the construction program, it is necessary to increase staffing resources. Each of these corridor projects includes multiple stations, facilities, parking areas, and vehicles which will require significant signage, wayfinding and overall environmental graphic design support, reviews, unique design solutions, and site visits in order to ensure the safety and movement of future riders. The Regional Connector alone will have a major impact on existing signage throughout the system.

### ISSUE

Signage and wayfinding are core elements of project delivery. Without functional signage in place the project will not meet safety, accessibility or operational requirements for Revenue Operations. The incorporation of functional signage into the project requires numerous submittals, reviews, and appropriate management and oversight.

Funds for Construction Management Support Services (CMSS) to provide signage and wayfinding support have been included in life-of-project budgets

and the FY16 budget and are forecasted for inclusion in individual project-based Contract Work Orders (CWO) within the overall Board approved CMSS Contract Values. There are no impacts to the current CMSS contracts as the consultant positions have not been included in current CWOs pending Board approval of the new Metro positions.

Because these positions are core to the agency, and there is an ongoing need to improve signage and maintain consistency across projects, as well as the desire to build in-house capacity, the recommendation make these Metro positions rather than multiple CMSS consultant positions. See Attachment 6-2A for job descriptions and justifications.

## DISCUSSION

The new staff positions will ensure that 1) over 4,000 signs and related Design/Builder submittals for the three corridor projects are reviewed and coordinated; 2) requests for information, over the shoulder reviews, approval of samples/finishes/mock-ups, fabrication shop drawings are fulfilled; 3) construction site visits and punch listing for quality control and compliance through resolution are conducted; and 4) signage needs during corridor start-up phase operations are accomplished. The positions being requested are not short term. While signage and wayfinding is installed prior to line opening, Metro has historically experienced an average “break-in” period of 18 months when actual customer usage generates modification requests from various departments to address operations, safety and accessibility concerns. It is envisioned that these FTEs will move to new Measure R projects including Purple Line Extension Section 2 and other corridor projects.

In addition to effective cost savings, staff determined that by not having multiple consultants do this work on a project by project basis, but rather with Metro staff, it will support the agency’s strategy to: 1) build-in house capacity; 2) decrease reliance on consultants; 3) maintain a trained and experienced workforce; and 4) maintain institutional knowledge and continuity across projects. Signage requests are growing, not diminishing and it is increasingly important to develop and maintain the continuity of our signage system.

## ALTERNATIVE

The Board may decide not to approve new Metro staff positions in which case the work will be completed by individual corridor consultants through CWO requests to the CMSS contracts for each project utilizing the hourly rates set forth in these Contracts. This is not recommended because: 1) it would require multiple consultants for each project rather than consolidated in-house staff; 2) signage is a core ongoing agency function which should be done by in-house Metro staff in order to ensure continuity across projects; 3) consultant

dependency results in loss of institutional knowledge; and 4) application of lessons learned and long term success and effectiveness will be compromised.

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## ATTACHMENT 6-2A - SIGNAGE & ENVIRONMENTAL GRAPHIC DESIGN (Cost Center 7121)

Funding	Position Title	Job Description	Justification	Required by
865512 Crenshaw/LAX, 860228 Regional Connector, 865518 Purple Line Section 1	Signage & Environmental Graphic Design Manager	Position will provide signage and environmental graphic design management for Crenshaw/LAX, the highly complex Regional Connector project (which will impact dozens of stations throughout the Metro system) as well as support the Purple Line Extension project. The position will ensure that the latest signage standards, drawings and specifications are included in contract documents and will review and respond to contractor RFIs, signage criteria clarifications, review and approve all contractor signage submittals and shop drawings, and develop and resolve punch lists. This position will participate in design resolution processes and address new station architectural design conditions requiring unique signage design solutions. It will also develop and implement lessons learned and update the design criteria for corridors. The position will coordinate with ADA, engineers, safety personnel and others to ensure uniformity and consistency of customer signage and wayfinding.	2/18/15 Board Box on construction project delivery and consultant services included this FTE to support the FY16 corridor construction projects and outlined the need for staffing as projects enter into active construction. The 2010 Measure R Strategic Advisor Report called the Measure R program “one of the largest capital improvement programs ever undertaken by a single transportation agency in the US” and recommended “increasing the capacity and improving skill sets...and allocating resources to improving wayfinding/signage.” Currently, there are no in-house agency staff reviewing contractor signage submittals, RFIs, etc for the 3 major corridor projects. This position is required to provide day-to-day management, coordination, reviews, site visits & support to the projects as well as coordinate with Operations and others on the many station signs in the existing system that will be impacted by these projects, especially the Regional Connector. There is an immediate need for signage management on these projects as without adequate in-house oversight, criteria updates & design reviews, costly corrections & retrofits will be necessary & signage will not be consistent across projects. Upon completion of these corridor projects, the FTE will be transitioned to address Section 2 and other future construction projects requiring new and/or modified signage management and coordination.	July 2015
865512 Crenshaw/LAX, 860228 Regional Connector, 865518 Purple Line Section 1	Senior Signage & Environmental Graphic Designer	Position will develop conceptual signage and environmental graphic design solutions from concept to final design for Crenshaw/LAX, Regional Connector and Purple Line Extension; they will provide ADA, safety and signage design support to addresses issues that arise during construction. They will also ensure that the latest standards and requirements for gating, fare enforcement, and other signs are used to design signage correctly. Signs often require specialized in-house designs for a range of unique station configurations or needs. This	2/18/15 Board Box on construction project delivery and consultant services included this FTE to support the FY16 corridor construction projects and outlined the need for staffing in core agency functions as projects enter into active construction. The 2010 Measure R Strategic Advisor Report called the Measure R program “one of the largest capital improvement programs ever undertaken by a single transportation agency in the US” and recommended “increasing the capacity and improving skill sets...and allocating resources to improving wayfinding/signage.” Currently, there are no in-house agency staff providing design support for the	July 2015

Funding	Position Title	Job Description	Justification	Required by
		<p>position will investigate and resolve signage design problems to arrive at best technical solutions in a wide range of mediums including static and digital signage. This position will also prepare visual presentations of proposed signage solutions for management level staff using variety of software, mockups and samples.</p>	<p>Crenshaw/LAX, Regional Connector or Purple Line Extension corridor construction projects. The Crenshaw/LAX stations have multiple configurations (underground, above ground, split platform, side platform) which require unique signage design solutions and the Regional Connector will impact stations throughout the system. Upon completion of these corridor projects, the FTE will be transitioned to address Section 2 and other future construction projects requiring signage design solutions.</p>	



**Table A  
Engineering & Construction  
FY16 FTE Request for Consultant Conversion Positions**

ATTACHMENT A

No. FTE	Cost Center	Project No.	Position Title	Job Description	Justification	QTR Needed	Priority (High-Medium-Low)	Internal/External	QCP
6	8410	860228—RG	Construction Inspector	<b>Construction Inspectors:</b> This position inspects each stage of construction of Regional Connector, track, tunnel and stations as well as all contractors activities to be in accordance with plans and specs. Program for non-compliance reports; maintains daily logs; monitor contractor testing activities; support construction safety functions; coordinates Metro tool lab activities and oversees DB inspection activities. Six (6) Positions are being filled at the time for Regional Connector project.	Construction Management Department does not have the personnel to assign to these activities at this point in time. Metro does not want to use consultants at this time due to the higher cost of consultants.	Q1	High	Internal/External	Yes
4	8410	860228—RG	Senior Construction Manager	<b>Senior Construction Managers:</b> This position oversees and manages rail facilities construction projects; oversees work to be accomplished according to project plans and is on schedule and within budget. Sets priorities for staff and oversees that staff are accomplishing assigned tasks. Two (2) positions are requested for the Regional Project.	Construction Management Department does not have the personnel to assign to these activities at this point in time. Metro does not want to use consultants at this time due to the higher cost of consultants.	Q1	High	Internal/External	Yes
2	8410	860228—RG	Senior Construction Manager	<b>Senior Construction Managers:</b> This position oversees and manages rail facilities construction projects; oversees work to be accomplished according to specification plans and is on schedule and within budget. Sets priorities for staff and oversees that staff are accomplishing assigned tasks. Two (2) positions are requested for the Regional Project.	The position is required to deliver quality capital projects on time and within budget. The Director position will be responsible for overseeing the work of lower level positions. Without the position, there is a risk of inadequate oversight.	Q1	High	Internal/External	Yes
4	8010	860228—RG	Director of Construction Management	This position is for the Regional Connector Project. This position is required to provide direction for the construction of the Project. Direct reports include the Senior Construction Manager and day to day management and allocation within the Construction Management Services Contractual. This position reports directly to the Project Manager.	The Regional Connector project has several structural elements that would require structural engineering reviews. Metro Engineering is expediting to receive a very large number of submittals that require our review. With the Design Builder already on board, a new position is needed in order to assist the project in review of all structural items on the project.	Q1	High	Internal/External	Yes
1	8320	860228—RG	Sr. Engineer (Structural)	To supervise structural items on the Regional Connector project.	The Regional Connector has several geotechnical elements that would require geotechnical engineering reviews. Metro Engineering is expediting to receive a very large number of submittals that require our review. With the Design Builder already on board on two of those projects and those geotechnical submittals to start construction in the summer, a new position is needed in order to assist the project in review of the geotechnical items on those submittals.	Q1	High	External	Yes
4	8320	860228—RG	Sr. Engineer (Geotechnical)	To supervise geotechnical items on the Regional Connector project.	An integrated System Integration Engineer is needed to support the Regional Connector project during design & construction. The Sr. Systems Integration Engineer is vital to ensure a seamless integration from New Systems to New Systems, New Systems to Existing Systems, New Systems to Facilities and Integrated Testing Test Plans, Field Testing etc.). An Integrated Risk System is vital for Metro's Operational needs.	Q1	Medium	External	Yes
4	8320	860228—RG	Sr. Engineer (Systems)	Supervise and manage all activities related systems integration on the Regional Connector project	Performs design document review, construction contact review, design and construction quality audits and surveillance; field inspection for the Regional Connector project as required, including laboratory and manufacturer audits and surveillance as directed by the Quality Assurance Manager. Arranges for Metro's verification test laboratory and coordinates the tests with inspection and Construction Management.	Q1	Medium	Internal	Yes
4	8110	860228—RG	Sr. Quality Engineer	Perform design document review, construction contact review, quality audits, surveillance; field inspection and monitoring of design for the Metrolink Project as required, including laboratory and manufacturer audits, surveillance and data analysis as directed.	Performs quality audits, surveillance; field inspection and monitoring of new construction modifications, as required, including monitoring of laboratory and manufacturer audits, surveillance and data analysis as directed. Coordinates with Director of Quality Management in the establishment, implementation and maintenance of Project Quality related goals, determination and management of budgetary, staffing requirements, implementation of Quality Program requirements for the Regional Connector project, and supervision of subordinate Quality Management staff assigned to the project.	Q1	Medium	Internal	Yes
4	8110	860228—RG	Quality Assurance Manager	Performs quality audits, surveillance; field inspection and monitoring of design, new construction modifications, as required, including monitoring of laboratory and manufacturer audits, surveillance and data analysis as directed. Coordinates with Director of Quality Management in the establishment, implementation and maintenance of Project Quality related goals, determination and management of budgetary, staffing requirements, implementation of Quality Program requirements for the Regional Connector project, and supervision of subordinate Quality Management staff assigned to the project.	Current recruitment is a consultant supporting full time in Measure R project. Over commitment, or sustainability related program. This is a conversion of full time seconded staff to regular Metro staff to reduce overall project delivery cost. Location per unit labor cost difference between seconded consulting staff and equivalent Metro position is up to 350%, depending on position.	Q1	High	Internal/External	Yes
16	Subtotal								



Table A  
Engineering & Construction  
F146 FTE Request for Consultant Conversion Positions

No. FTE	Cost Center	Project No.	Position Title	Job Description	Justification	QTR Needed	Priority (High-Medium-Low)	Internal/External	QCP
6	8410	866512 - CLAX	Senior Construction Inspector	Inspector - Southwest Yard(H). This position is for Southwestern Yard Project. The inspector will support the R.E. and be required to inspect and monitor installation of the work; review and prepare reports; review and interpret plans and specifications; ensure compliance with codes, standards and contract documents; assist in resolving problems in the field; coordinate work with other agencies. -Inspector Systems (P.sash). This position is for Crenshaw/LAX Transit Project. The Systems Inspector will support the project R.E. and be required to inspect and monitor installation of the systems work; review and prepare reports; review and interpret plans and specifications; ensure compliance with codes, standards and contract documents; assist in resolving problems in the field; coordinate work with other agencies. -Inspector MEP (P.sash). This position is for Crenshaw/LAX Transit Project. The MEP Inspector will support the project R.E. and be required to inspect and monitor installation of the mechanical, electrical and plumbing work; review and prepare reports; review and interpret plans and specifications; ensure compliance with codes, standards and contract documents; assist in resolving problems in the field; coordinate work with other agencies.	Construction Management Department does not have the personnel to assign to these activities at the point in time. Metro does not want to use consultants at this time due to the higher cost of consultants.	Q1	Medium	External	
4	8410	866512 - CLAX (Southwestern Yard)	Director of Construction Management	<b>Dir. Construction Manager, Yard Spoilbank</b> - This position is for Southwest Yard Project. The Dir. Construction Manager (Yard Spoilbank) will oversee the contractor's design and specification development, interfacing with Metro Engineering. During construction, the position will oversee the development of workplans, schedules and estimates; administer and monitor work for compliance with contract documents; coordinate with Metro staff and outside agencies; review change requests and prepare change notice justifications.	Construction Management Department does not have the personnel to assign to these activities at the point in time. Metro does not want to use consultants at this time due to the higher cost of consultants.	Q1	High	External	
4	8410	866512 - CLAX	Director of Construction Management	<b>Dir. Construction Manager</b> - This position is for Crenshaw/LAX Transit Project Segment B. This individual will oversee and manage construction development of workplans, schedules and estimates; administer and monitor work for compliance with contract documents; coordinate with Metro staff and outside agencies; review change requests and prepare change notice justifications.	Construction Management Department does not have the personnel to assign to these activities at the point in time. Metro does not want to use consultants at this time due to the higher cost of consultants.	Q1	High	External	
4	8410	866512 - CLAX	St-Construction Manager (SPECIALIST-SYSTEMS)	<b>RESIDENT ENGINEER ASSISTANT</b> This position is for Crenshaw/LAX Transit Project. The Senior Construction Manager will act as Assistant Structures Resident Engineer and be required to oversee and manage construction development of workplans, schedules, estimates and specifications; administer and monitor work for compliance with contract documents; coordinate with Metro staff and outside agencies; review change requests and prepare change notice justifications. The position reports to the Director Construction Management through a matrix organization.	The position requires a Structures specialist to support the Resident Engineers for the Mainline Crenshaw/LAX Project.	Q1	Medium	External	
4	8410	866512 - CLAX	St-Construction Manager (SPECIALIST-SYSTEMS)	<b>RESIDENT ENGINEER</b> This position is for Crenshaw/LAX Transit Project. The Senior Construction Manager will act as Systems Resident Engineer and be required to oversee and manage construction development of workplans, schedules, estimates and specifications; administer and monitor work for compliance with contract documents; coordinate with Metro staff and outside agencies; review change requests and prepare change notice justifications. The position reports to the Director Construction Management through a matrix organization.	The position requires a Systems specialist to support the Resident Engineers for the Mainline Crenshaw/LAX Project.	Q1	Low	External	
2	8410	866512 - CLAX 866003 - Southwestern Yard	Construction Manager	The Construction Managers will be required to analyze data, specifications and drawings; assist in monitoring work for compliance with schedule, budget, technical and legal requirements; prepare technical reports and correspondence; assist in coordination with outside agencies; maintain project records; monitor status of submittal and design reviews. The position reports to the Director Construction Management.	These positions are required to support the Office Engineer role for Crenshaw/LAX and the Southwestern Yard Projects.	Q2	Medium	External	
4	8320	866512 - CLAX	St-Engineer	To supervise structural teams on the Crenshaw Projects and support upper management on miscellaneous Metro Operation tasks.	The Crenshaw project has several structural elements including three underground stations, three cut and cover tunnels, two bridges, one pedestrian underpass, several at grade stations, support of excavations for underground stations and cut and cover tunnels and miles of retaining walls. Metro Engineering receives a very large number of submittals that require our review. Many a times these submittals are urgent and need to be reviewed immediately for incorporation in immediate construction activities. This supervising structural engineering position is needed to facilitate proper review of these submittals.	Q2	High	External	
4	8320	866512 - CLAX	St-Engineer (System)	Supervise and Manage all activities related Systems Integration on the Crenshaw/LAX project.	An experienced System Integration Engineers is needed to support the Crenshaw/LAX project during design & construction. The Systems Integration Engineer is vital to ensure a seamless integration from New Systems to Now Systems, New Systems to Existing Systems, New Systems to Facilities and Integration Testing Test Plans, being testing over 7 on integrated New Systems to that for Metro's Operational needs.	Q2	High	External	



No. FTE	Cost Center	Project No.	Position Title	Job Description	Justification	QTR Needed	Priority (High - Medium - Low)	Internal/External	QCP
1	8320	865612—CLAX	Sr-Engineer	Supervised the design of the emergency-Tunnel-ventilation and HVAC for major rail and CIP Projects (existing underground systems).	Currently Systems Engineer has only one Tunnel Ventilation engineer- which is insufficient to deal with the upcoming underground projects (Greenway, RG and PL E projects). The emergency ventilation of our rail lines in stations and in tunnels are paramount to a safe system. A second supervising engineer is a must for F+16.	Q2	Medium	External	
1	8420	865612—CLAX	Sr-Environmental Specialist	Assist in the execution of environmental compliance and sustainability for the Greenway/LAX Project.	Current incumbent is a consultant supporting full time in Measure R project- environmental- or sustainability related program. This is a conversion of full time seconded staff to regular Metro staff to reduce overall project delivery cost. Loaded per unit labor cost difference between seconded consulting staff and equivalent Metro position is up to 350% - depending on position.	Q1	High	External	
1	8420	865612—CLAX	Sr-Environmental Specialist	Assist in the execution of environmental compliance and sustainability for the Greenway/LAX Project.	Current incumbent is a consultant supporting full time in Measure R project- environmental- or sustainability related program. This is a conversion of full time seconded staff to regular Metro staff to reduce overall project delivery cost. Loaded per unit labor cost difference between seconded consulting staff and equivalent Metro position is up to 350% - depending on position.	Q1	High	External	
1	8110	865612—CLAX	Sr-Quality Engineer	The Sr-Quality Engineer will be required to coordinate with construction reporters and monitor field construction activities- coordinate verification testing- evaluate quality performance.	Perform design document review, construction contract review, design and construction quality audits and surveillance; field inspection for the project as required, including laboratory and manufacturer audits and surveillance; and coordinate the field with inspectors for Metro's verification test laboratory and coordinate the field with inspectors for construction management.	Q1	High	External	
<b>17 Subtotal</b>									
1	8010	865618—WPL1	Sr-Administrative Analyst	The position is for Section 2 of the Westside Purple Line Extension Project. The Sr-Administrative Analyst will provide administrative support to project staff and assistance in managing an Integrated Project Management Office (IPMO). This position will report to the Project Manager.	This position is required to support project staff and to assist in managing the IPMO. This position will also be responsible for issuing project management Management Plan (PMP), monthly and quarterly project reports and presentations. This position will also assist the CEO Project Center in coordinating with various Metro Departments to obtain documentation necessary to receive an FCGA.	Q1	Low	Internal/External	
1	8420	865622—WPL2	Principal-Environmental Specialist	Assist in the execution of environmental compliance and sustainability related projects of the Purple Line Extension.	Current incumbent is a consultant supporting full time in Measure R project- environmental- or sustainability related program. This is a conversion of full time seconded staff to regular Metro staff to reduce overall project delivery cost. Loaded per unit labor cost difference between seconded consulting staff and equivalent Metro position is up to 360% - depending on position.	Q1	High	Internal/External	
1	8010	865622—WPL2	Sr-Engineering Manager	This position is for Section 2 of the Westside Purple Line Extension Project. The position is required to provide direction for the engineering of the Project. The Senior Engineering Manager will provide day to day management and interaction with the Engineering Management Services Consultant. This position reports directly to the Director Engineering.	This position is required to deliver quality capital projects on time and within budget. On December 31, 2014, The Federal Transit Administration (FTA) approved Metro's request for Section 2 of the Westside Purple Line Extension Project to enter the New Starts Engineering Phase of the FTA Capital Investment Grant Program. This is one of the major steps towards obtaining a Fund Funding Grant Agreement (FFGA) for the Project, which is planned for mid-2016. Another major step in obtaining an FFGA is to provide adequate staff to meet FTA's expectations on technical capacity and capabilities to bring the Project on time and within budget. It is expected that the Advanced Preliminary Engineering will comprise at F+16 to support the issuance of the Design/Build RFP procurement.	Q1	High	Internal/External	
1	8110	865618—WPL1	Sr-Construction Inspector	Perform quality audits, surveillance, field inspection and monitoring of design, new construction, modifications, as required, including monitoring of laboratory and manufacturer audits, surveillance and data analysis as directed.	Perform quality field surveillance, monitoring of new construction, modifications, as required, including monitoring of testing laboratory and manufacturer audits, surveillance and data analysis for the Purple Line Extension, Section 1 as directed by the Quality Assurance Manager.	Q1	Medium	Internal	
<b>4 Subtotal</b>									
<b>37 Grand Total</b>									

\*These positions have been approved by the Board at the May 28, 2015 Special Board Meeting - FY 16 Budget.