



Board Report

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Agenda Number: 22.

OPERATIONS, SAFETY, AND CUSTOMER EXPERIENCE COMMITTEE APRIL 21, 2022

SUBJECT: CRENSHAW/LAX OPERATING PLAN UPDATE

ACTION: APPROVE RECOMMENDATION

RECOMMENDATION

AUTHORIZE the Chief Executive Officer to review the Crenshaw/LAX Operating Plan, including conduct necessary public outreach and report back to Board with findings and a recommendation to maintain or change the Operating Plan.

ISSUE

In December 2018, the Metro Board adopted Motion 2018-0730 for an initial one-year pilot operating plan for the Crenshaw/LAX new light rail link. Since approving this pilot plan, significant circumstances have changed that make it timely for review. These include sequencing of the Airport Metro Connector station construction and operational resource requirements as Metro responds to the impacts of the COVID-19 pandemic, NextGen Bus Plan implementation, as well as planning for future rail expansion. These factors are discussed further below.

BACKGROUND

Crenshaw/LAX Rail Project:

The Crenshaw/LAX Rail (CLAX) Project is an 8.5-mile extension of C Line (Green) light rail from Aviation/Imperial to the Exposition Line at Exposition/Crenshaw (Figure 1), including eight new stations. An associated project, the new Airport Metro Connector (AMC) Station, will add a ninth station to provide a direct connector to the new LAX airport people mover system.

A pilot operating plan was approved for the new Crenshaw/LAX line as outlined below in Board Motion 2018-0730:

APPROVED CRENSHAW/LAX- GREEN LINE OPERATING PLAN (NOV 2018)

APPROVED Motion by Hahn, Butts, Solis, Najarian, Fasana & Garcia that the Board instruct the CEO to

- A. implement Alternative C-3 for the Crenshaw/LAX -Green Line Operating Plan as a 1-year pilot plan** in anticipation of the opening of the LAX Automated People Mover (APM) and 96th

- Street Station, maintaining the existing headways on the C (Green) Line;
- B.** report back to the Metro Board one (1) year after the pilot is over to **reevaluate the ridership and travel demand**; and
- C.** as a new policy, **bring future substantive changes to rail operating plans to the Metro Board for approval** as a matter of course, instead of "receive and file."

The C-3 alternative (See Figure 2 below) would provide two service patterns with double service along the I-105 corridor:

- New CLAX east/west service between Norwalk and Aviation/LAX C Line (Green) stations, continuing north to connect with the Expo Line
- C Line (Green) east/west service between Willowbrook/Rosa Parks and Aviation/LAX, continuing south to serve Redondo Beach Stations

See attachment A Figure 1 - Crenshaw Rail Project and Figure 2 - Crenshaw C-3 Plan

DISCUSSION

Since the Board adoption of Motion 2018-0730, some circumstances have changed that make it timely for a review of the original decision. These are discussed below.

Project Sequencing:

At the time Motion 2018-0730 was adopted, it was expected that the full Crenshaw/LAX line would open for revenue service in October 2019, around three years ahead of the construction beginning on the Airport Metro Connector (AMC) Station. Now the Crenshaw/LAX line will start revenue service in Fall 2022. At the same time, the AMC station construction has broken ground, meaning the Crenshaw/LAX line opening will be in three phases:

1. 2022: Westchester/Veterans - Expo/Crenshaw (7 stations), with a bus bridge Westchester/Veterans station - Aviation/LAX station on the C Line (Green)
2. Late 2023: Full Crenshaw/LAX line open through Airport Metro Connector Station, though that station will not be completed for passenger service
3. Late 2024: Airport Metro Connector station to open for passenger service

Board Motion 2018-0730 established a one-year trial for the C-3 operating plan. However, while a pilot consistent with the original Board motion could begin in phase 2 above, there is only a 14-month period before the AMC station opens to passengers. This leaves no time to evaluate the C-3 option 12-month pilot's performance and consider any adjustments for permanent ongoing operations before AMC opens. Furthermore, the motion indicated that staff should review the operating plan in anticipation of the AMC Station. This review is consistent with this directive.

Operational Resource Requirements:

The three main alternatives considered had a range of resource requirements for service:

Alternative	Railcar Fleet	Rail Operators
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C-1	53	90
C-2	51	93
C-3	60	105

The C-1 and C-2 alternatives have a short overlap of two rail services between Aviation/LAX and AMC stations. The C-3 alternative has overlap of two rail services along the I-105 corridor between Willowbrook/Rosa Parks and Aviation/LAX stations. , requiring more operators and rail cars. Modelling of ridership potential showed a less than three percent difference in ridership between the C-1, C-2, and C-3 alternatives.

Rail operators are recruited from bus operator ranks. Operator hiring needs are significant at this time, particularly given the “Great Resignation” and changes in the labor supply after the pandemic and may remain so for some time based on hiring progress to date. The needs for this rail project will take from bus operator ranks, leaving less operators available for bus service.

See attachment A, Figure 3 - Crenshaw/LAX Alternatives

NextGen Bus Plan and Regional Travel:

The Crenshaw/LAX line helps build a network, both for the Metro rail system but also as part of the overall regional transit network including Metro buses and municipal bus lines.

The region served by the C Line (Green) segment between Norwalk station and Aviation/LAX station shows a wide distribution of travel patterns to locations north and south of the C Line (Green). These areas are served by transit lines proceeding north and south of the rail line (see Figure 4 below). In December 2021, much of the NextGen Bus Plan was implemented, providing fast, frequent north-south bus connections from the C Line (Green) serving many Equity Focus Communities where transit service is a key for community mobility. Metro’s A Line (Blue) rail service and J Line (Silver) BRT service also provide key north-south connections from the C Line (Green). Municipal agencies such as Long Beach Transit complete the regional connections from the C Line (Green). The regional bus and rail network provides key links from the C Line (Green) to downtown LA, USC, and mid-city areas matched to key travel patterns (See Figure 5 below). The three alternatives each would serve the segment between Norwalk and Aviation/LAX Stations, maintaining connections to north-south transit lines at stations along this segment.

The LAX area is a key regional destination. Both the C-1 and C-2 options provide direct access to AMC for LAX access from all three directions of the rail network. C-3 option provides a direct link to the AMC from the Crenshaw and Norwalk directions.

See Attachment A, Figure 4 - Regional Travel Patterns from Norwalk segment of C-Line Green

See Attachment A, Figure 5, Key NextGen and Rail Transit Connections from C line (Green)

Travel patterns for the South Bay areas along the Redondo Beach segment of the C Line (Green), as shown in Figure 5 below are aligned largely north-south to the LAX region and areas north and west. A connection to the AMC from this segment would allow connections with many regional bus lines to

key westside corridors such as Lincoln and Sepulveda served by Big Blue Bus and Culver City Bus.

See Attachment A, Figure 6: Redondo Beach Segment of C Line (Green) Overall Travel Patterns

Future Rail Corridors:

There are two rail extension Measure M projects in planning that relate to the Crenshaw/LAX line and C Line (Green):

- 1) C Line (Green) Extension to Torrance: providing greater access to the South Bay by extending the C Line 4.5 miles south from Redondo Beach to the Torrance Transit Center. The Draft EIR expected in late 2022 with an estimated opening in 2030-2032.
- 2) Crenshaw Northern Extension: Extends the Crenshaw/LAX line north from Expo/Crenshaw Station to the D (Purple) Line in mid-Wilshire and the B (Red) Line in Hollywood. Three alignments are under study as part of the Draft EIR, which is being prepared to make the project “shovel ready” should funding become available to accelerate the project in advance of its Measure M timeline of 2047-2049.

The opportunity exists to eventually create a north-south rail alignment extending from Torrance to West Hollywood.

Connections:

Schedules can be coordinated for a very convenient 3-minute transfer all times of day at AMC station for passengers transferring between trains there.

Bus speed improvement measures are also being planned or implemented for the Lincoln and Sepulveda Rapid buses and other key bus corridors connecting with the rail network. Improve regional travel times between the Aviation/LAX, AMC Station and the westside. Examples of such measures include bus lane extensions on Lincoln and transit signal priority on Sepulveda Bl at Culver City.

Public Outreach

The significant change of circumstances outlined above since the Metro Board adopted Motion 2017-0730 in November 2018 support the need to conduct relevant public outreach to develop an updated Crenshaw/LAX line operating plan recommendation in time for Board consideration in advance of implementation in late 2023 when operation of the Crenshaw/LAX line through the AMC site becomes possible. This would not impede the opening of the initial operating segment for Crenshaw/LAX in 2022.

FINANCIAL IMPACT

This item is to seek Board authorization for CEO to conduct relevant public outreach needed to develop an updated operating plan for the Crenshaw/LAX line.

Impact to Budget

While there is no impact to the proposed FY23 budget directly from this item, and the introduction of revenue service on the initial operating segment of the Crenshaw/LAX line is included in the Metro FY23 budget request. Any resulting decision by the Metro board on an operating plan for Crenshaw/LAX will be reflected in FY24 and subsequent budget years.

EQUITY PLATFORM

There are not expected disparities between available Crenshaw/LAX operating plan choices; all are anticipated to preserve high frequency rail service on all existing and new rail segments. Outreach as proposed in this Board item would help Metro confirm the key convenient connections to be established to maximize ridership on the Metro transit network, especially those who live and work within Equity Focus Communities that rely most on transit. The recommendation will also allow communities served by the Crenshaw/LAX and C Line (Green) services to provide valuable input to Metro's process of updating the Crenshaw/LAX operating plan.

IMPLEMENTATION OF STRATEGIC PLAN GOALS

Recommendation supports strategic plan goal #1: Provide high quality mobility options that enable people to spend less time traveling. The service changes also respond to the sub-goal of investing in a world class bus system that is reliable, convenient, safe, and attractive to more users for more trips.

NEXT STEPS

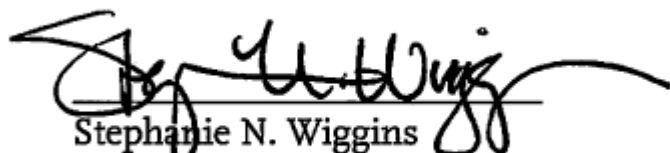
Should the Board approve the recommendation, staff will begin the required outreach process in the second half of 2022. Staff would return to the Board in early 2023 with a recommended Crenshaw/LAX operating plan for Board consideration.

ATTACHMENT

A. Figures 1 through 6

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Stephanie N. Wiggins
Chief Executive Officer

CRENSHAW/LAX OPERATING PLAN UPDATE FIGURES 1 through 6

Figure 1 – Crenshaw Rail Project



Figure 2 – Crenshaw C-3 Plan

Alt C-3: Green Line shortline,
Crenshaw to Norwalk

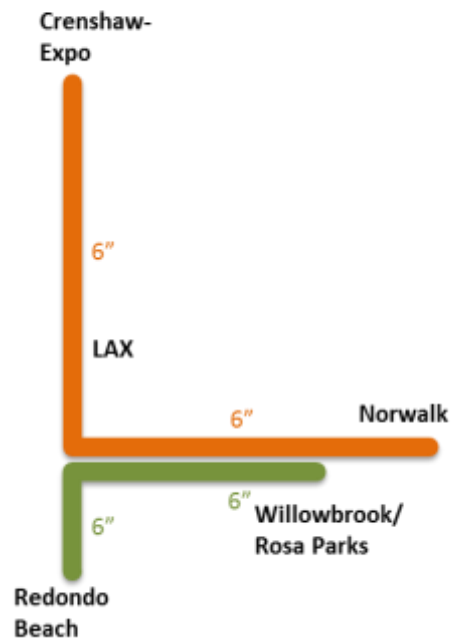
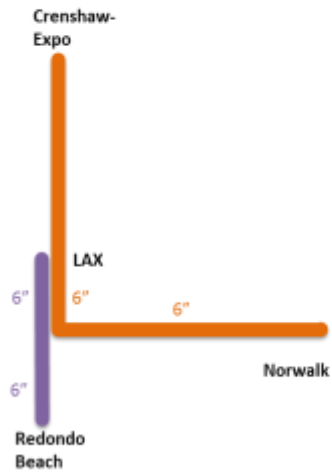
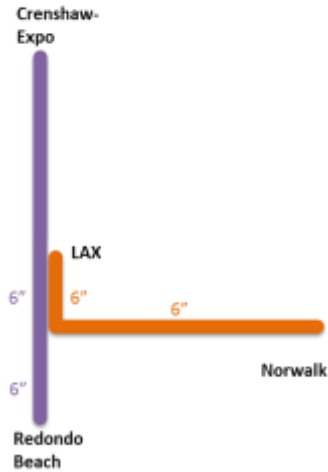


Figure 3 – Crenshaw/LAX Alternatives

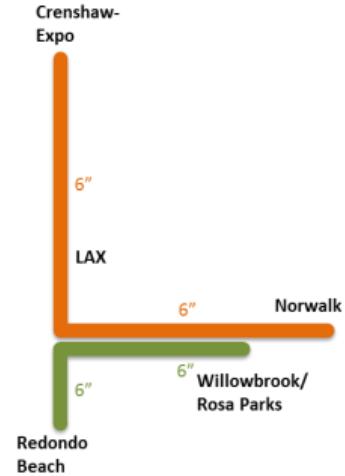
Alt C-1: Crenshaw/Norwalk Interline with Redondo Shuttle



Alt C-2: Crenshaw/Redondo Interline, Norwalk Shortline



Alt C-3: Green Line shortline, Crenshaw to Norwalk

**Figure 4 – Regional Travel Patterns from Norwalk segment of C-Line Green**

Norwalk Segment travel patterns are to north and south of the C Line (Green) between Norwalk and Aviation/LAX Stations

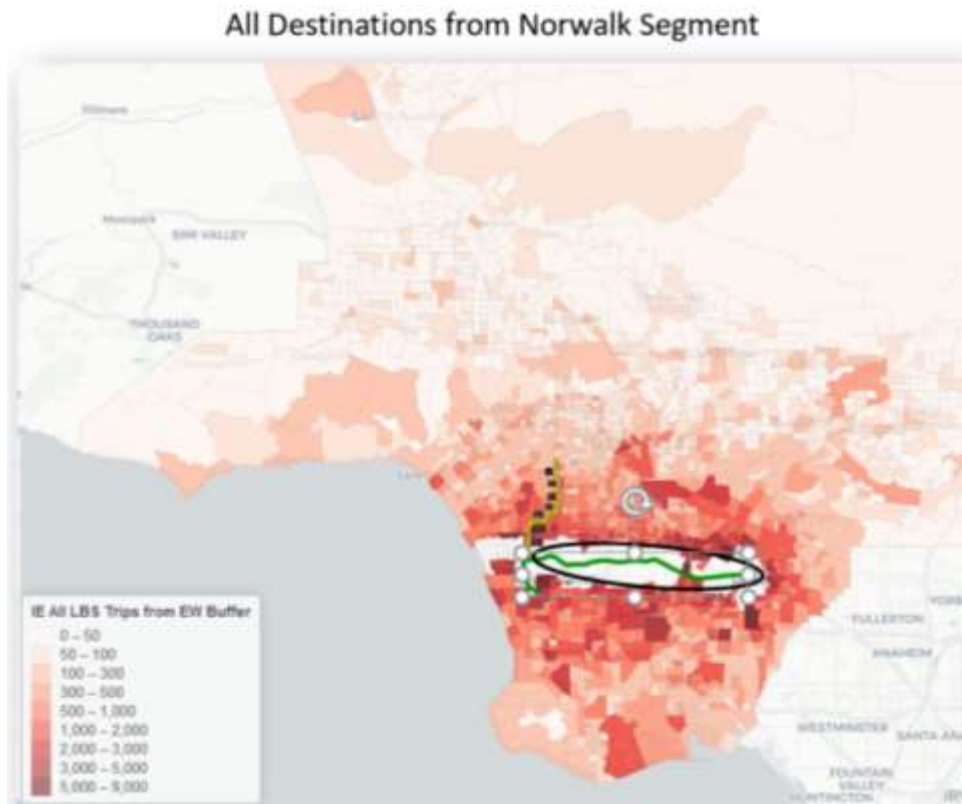
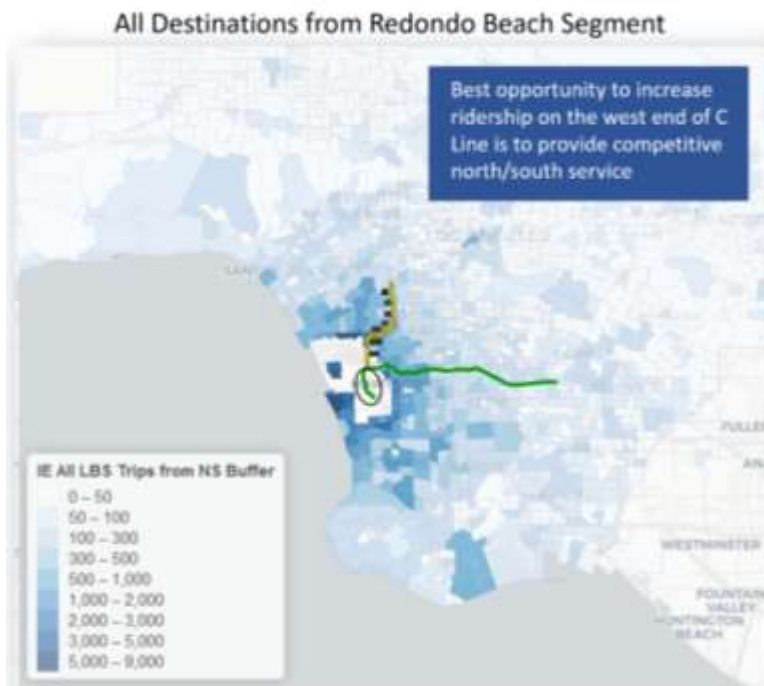


Figure 5 – Key NextGen and Rail Transit Connections from C Line (Green)



Figure 6: Redondo Beach Segment of C Line (Green) Overall Travel Patterns



CRENSHAW/LAX LINE OPERATING PLAN UPDATE



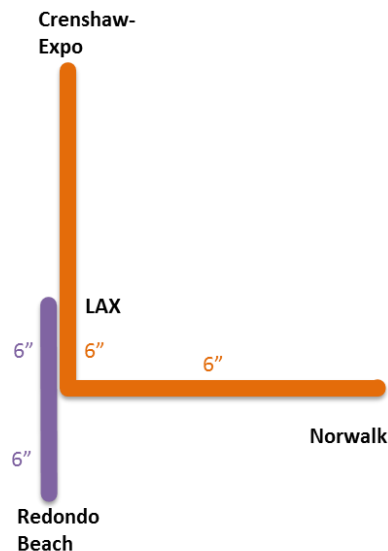
Metro

Operations, Safety, and Customer Experience Committee

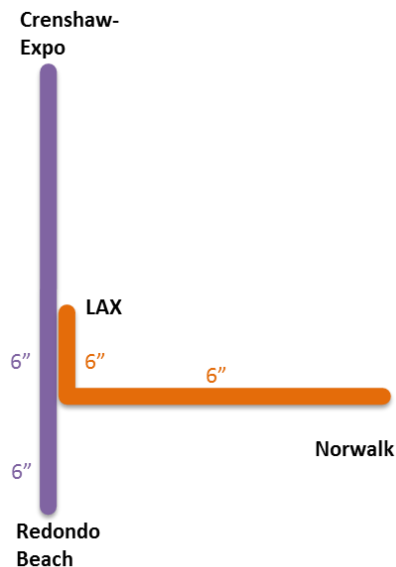
April 21, 2022

Crenshaw/LAX Scenarios (2018)

Alt C-1: Crenshaw/Norwalk Interline with Redondo Shuttle



Alt C-2: Crenshaw/Redondo Interline, Norwalk Shortline



Alt C-3: Green Line shortline, Crenshaw to Norwalk



Board Adopted
1 Year Pilot

Operating Plan Update Considerations

**Project
Sequencing**

**Operational
Impacts**

**Regional Travel &
NextGen Bus Plan**

Future Rail Plans

Project Sequencing

- Motion 2018-0730 intended to have C Line (Green) continue to operate the current routing for a 1 year pilot, well in advance of Airport Metro Connector Station (AMC) opening.
- Board motion directs staff to revisit the Operations Plan in anticipation of AMC. This review addresses that directive.
- Due to delays in the Crenshaw/LAX project, minimal 14-month gap now between Crenshaw and AMC openings.
 1. Westchester/Veterans to Expo/Crenshaw (Summer 2022)
 2. Aviation/LAX to Expo/Crenshaw, integrated with the C Line (Green) (Fall 2023)
 3. AMC opens (Late 2024)
- Due to only a 14-month gap now between phases 2 and 3 above, there is insufficient time to run a 12-month pilot, evaluate, and revisit the Operations Plan prior to AMC opening.



Operational Impacts

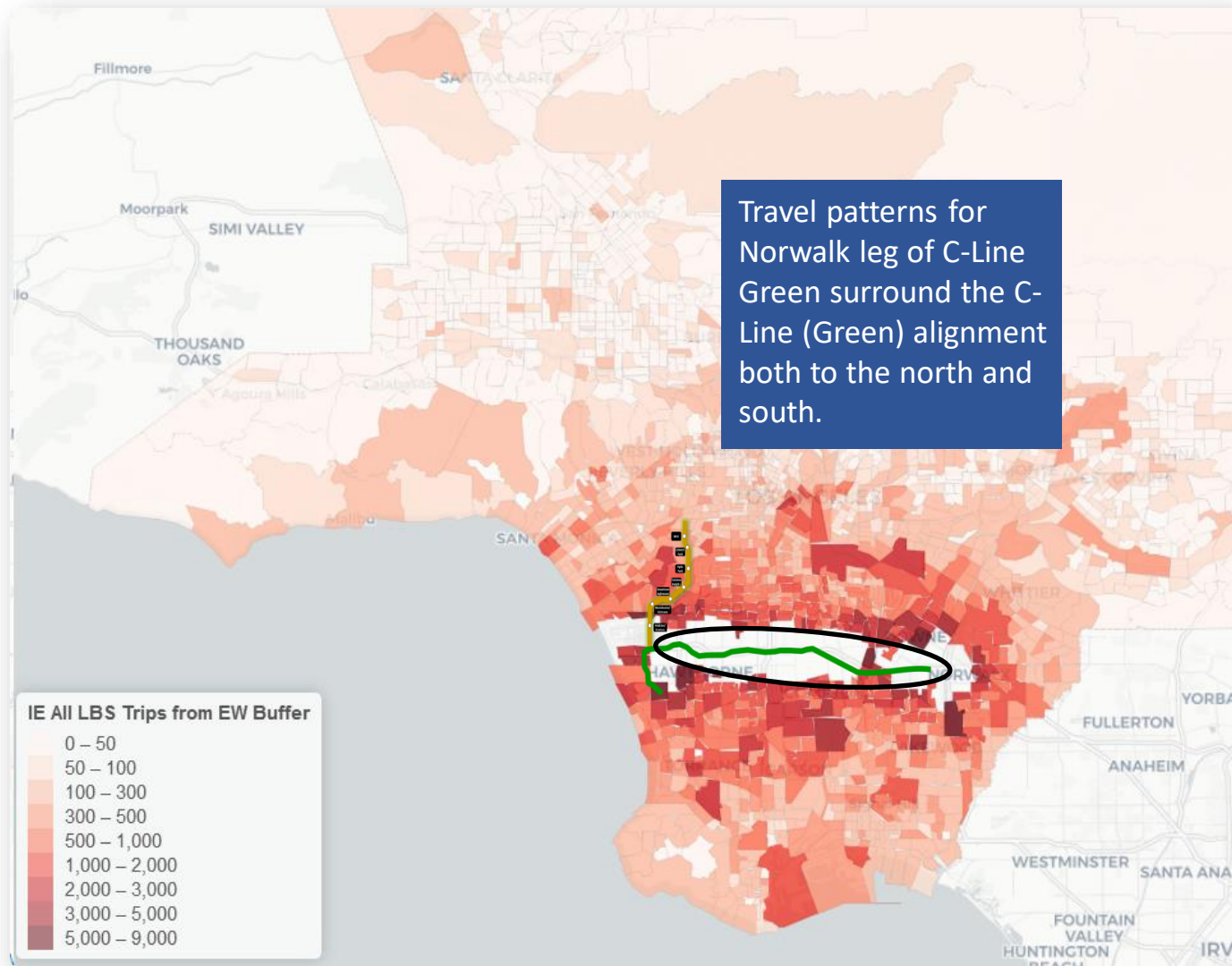
Option	Railcar Fleet Need	Reduced Operators Vs C-3
C-1	53	90
C-2	51	93
C-3	60	105

- COVID has negatively impacted operator availability and this condition may be a challenge.
- Rail operator requirements are filled from the bus operator ranks.

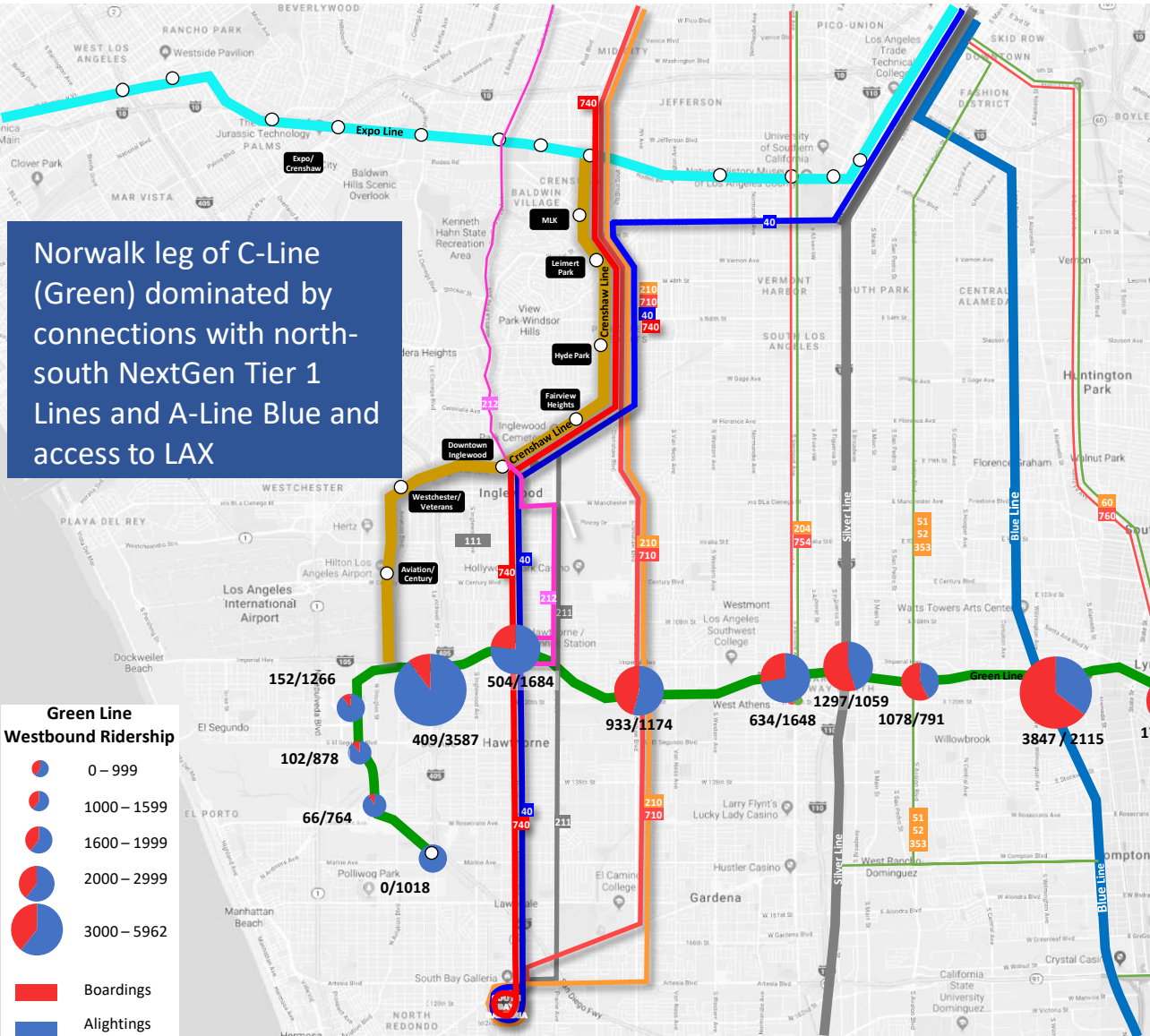
All Travel (cell phone data) Norwalk-Aviation Green Line Destinations



All Destinations from Norwalk Segment



C LINE (GREEN) Transit Ridership



Norwalk – Vermont

- 68% of C Line ridership
- Transfers between C Line and bus/A Line faster to key destinations (DTLA, Mid City)

Hawthorne/Lennox-Crenshaw

- 12% of C Line ridership
- Travel time competitive between C Line + bus and C Line + Crenshaw

Aviation/Imperial

- 9% of C Line ridership
- Primarily transfers, which will be moved to AMC

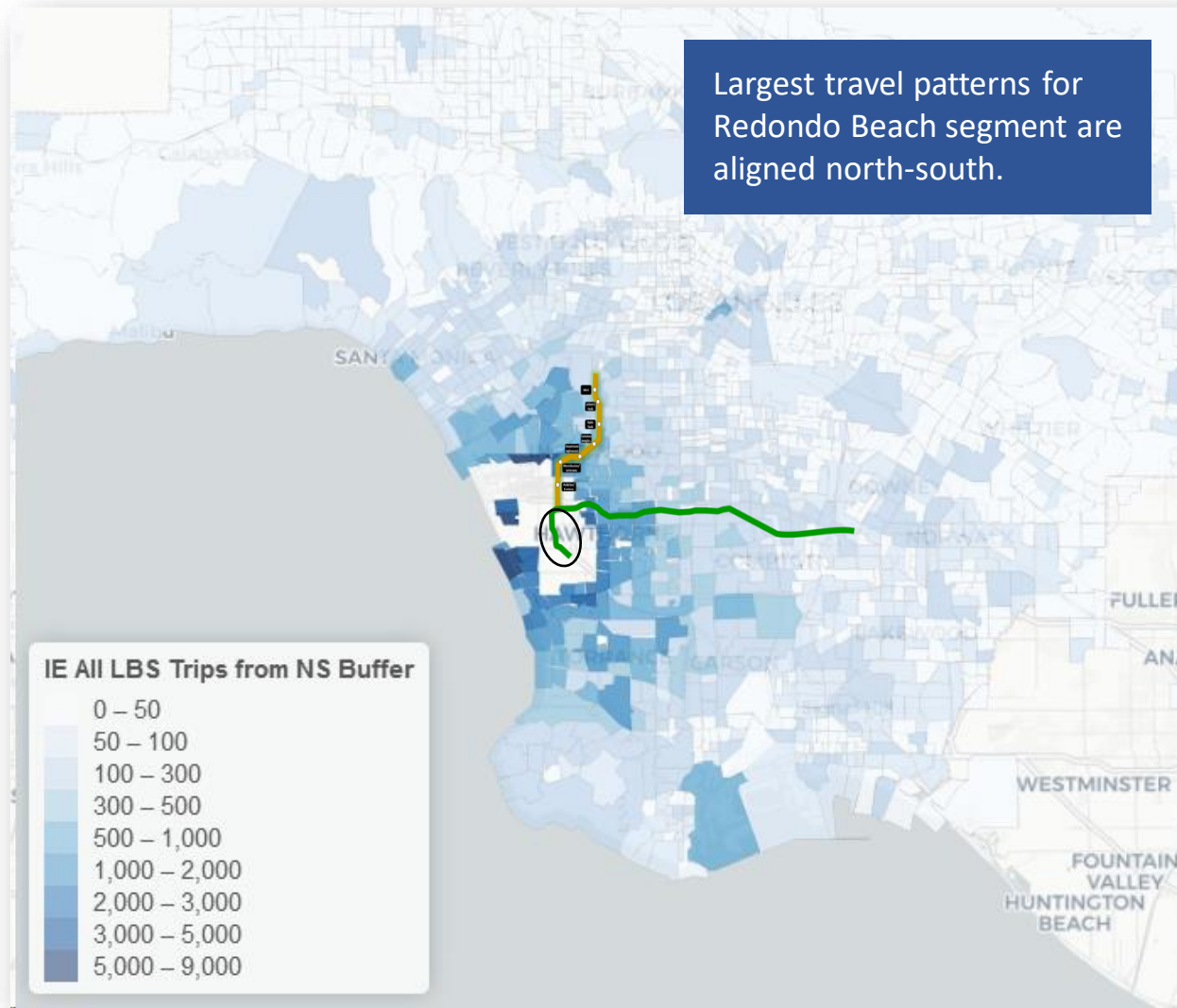
Mariposa - RB

- 11% of C Line ridership
- Least ridership currently

All Travel (cell phone data) Mariposa-RB C Line Destinations



All Destinations from Redondo Beach Segment



Future Torrance Extension

Peak Hour Ridership 2042	
Norwalk to AMC	4,980
Crenshaw/Expo to Torrance	6,320
Airport People Mover	920
Total Peak Hour	12,220

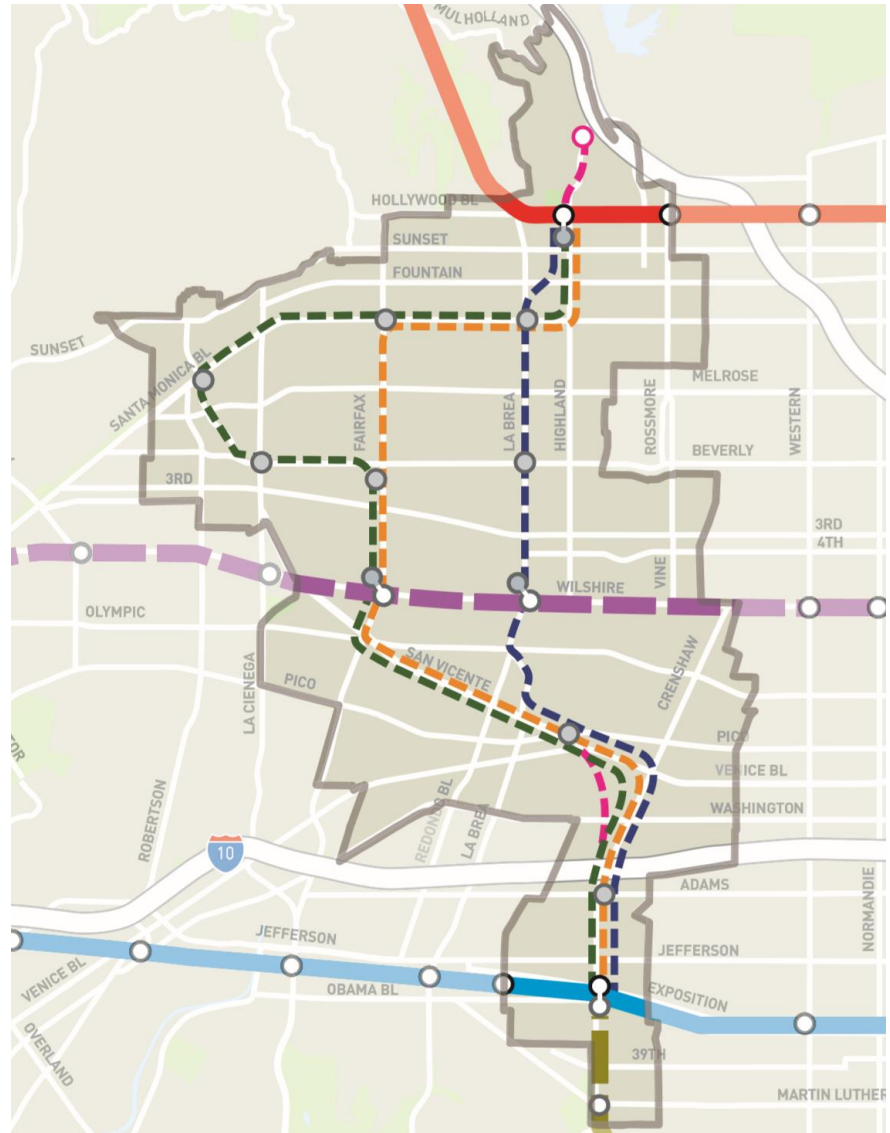
Can accommodate peak hour ridership for both lines with 2-car trains

~1,400 Riders on Torrance Ext (2 new stations)



Future Crenshaw Northern Extension

- Strong community support for north/south line and one-seat ride from Hollywood to Torrance
- Opening Year 2047 (Measure M) with local efforts underway to identify early delivery strategy
- Metro initiated environmental study to make project "shovel-ready"
- Ridership estimation (yet to occur) will determine need for 3-car trains and additional infrastructure (platform expansions and power substations)



Recommendation

- The change of circumstances since the Metro Board adopted Motion 2017-0730 in November 2018 for a one-year pilot of the C-3 operating plan supports the need to conduct relevant public outreach to develop an updated Crenshaw/LAX line operating plan recommendation.
- This outreach would be completed in time for Board consideration in advance of implementation in late 2023 when operation of the Crenshaw/LAX line through the AMC site becomes possible.
- This would not impede the opening of the initial operating segment for Crenshaw/LAX in 2022.