



## Board Report

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**File #:** 2021-0737, **File Type:** Informational Report

**Agenda Number:** 22.

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**OPERATIONS, SAFETY, AND CUSTOMER EXPERIENCE COMMITTEE  
JANUARY 20, 2022**

**SUBJECT: MOTION 22.1: NEXTGEN BUS SPEED ENGINEERING WORKING GROUP STATUS UPDATE**

**ACTION: RECEIVE AND FILE**

**RECOMMENDATION**

RECEIVE AND FILE the status report in response to Motion 22.1 entitled NextGen Bus Speed Engineering Working Group (July 2019).

**ISSUE**

In July 2019, the Board approved Motion 22.1 entitled NextGen Bus Speed Engineering Working Group as part of the NextGen Service Concept. This motion requests the following:

- A. Develop a list of priority bus supportive infrastructure projects needed to support the NextGen bus service plan, with an emphasis on near-term improvements that can be implemented concurrently with each phase of NextGen;
- B. Form a NextGen Bus Speed Engineering Working Group co-chaired by the Metro CEO and the General Manager (GM) of the Los Angeles Department of Transportation (LADOT), or their designees, and establish a regular meeting schedule, at least monthly;
- C. Assess the need for coordination with additional local jurisdictions and municipal operators where bus delay hotspots exist; and
- D. Report back to the Operations, Safety and Customer Experience Committee on the above in April 2020, and quarterly thereafter.

This update provides details regarding a technical working group appointed by Metro and its efforts to coordinate with a complementary group from Los Angeles Department of Transportation (LADOT) to develop a work program to improve bus priority and assess the need to coordinate with other jurisdictions and municipal operators.

This report provides a status update as of FY22 Q2 on the response to Motion 22.1.

**BACKGROUND**

In July 2018, the Board adopted Motion 38.1, endorsing travel speed, service frequency, and system reliability as the highest priority service design objectives for the NextGen Bus Study. These

objectives were incorporated into the NextGen Regional Service Concept approved by the Board in July 2019, which provides the framework for restructuring Metro's bus routes and schedules.

Concurrent to the approval of the NextGen Regional Service Concept, the Board also approved Motion 22.1: Engineering Working Group (Attachment A), which provides direction to staff to establish a partnership between Metro and LADOT to identify, design, fund and implement transit supportive infrastructure to speed up transit service as part of the NextGen Bus Plan.

Metro appointed a Technical Working Group focused on identifying, planning, designing and implementing bus speed and reliability improvements. Metro Service Planning, in close partnership with LADOT's equivalent technical team, consisting of Traffic Operations, Active Transportation, Vision Zero, and Transportation Planning Groups, has been meeting regularly (every 2-4 weeks) to ensure ongoing coordination and advancement of the program. Additional Metro departments (e.g. Communications, Planning, OMB, OEI, Program Management, Security) and other municipal traffic departments and transit operators are engaged as needed when specific projects have been defined and advanced towards design and implementation.

An External Affairs Working Group was also established as a subcommittee of the Technical Working Group. It is comprised of staff from Metro Community Relations, LADOT External Affairs, StreetsLA, the Los Angeles Mayor's Office, Metro Board Staff and Metro Service Planning. Their work focuses on coordinating to communicate with and prepare communities for coming improvements, including identifying and addressing potential impacts and coordinating outreach and engagement efforts for these projects.

At major milestones and as needed, the Technical Working Group will report on progress to the Metro CEO and LADOT's GM, and/or their designees, to seek direction on goals and objectives of the Technical Working Group, as well as policy guidance on balancing priorities for roadway and curb space.

## **DISCUSSION**

Since the last update provided to the Board in September 2021, the Working Group has met regularly on the following:

### Alvarado Street Bus Priority Lane

Following completion of the LADOT segment of the Alvarado St Bus Priority Lane between 7<sup>th</sup> Street and US-101 Freeway, Caltrans is currently providing final review and approval for its remaining segment between US-101 Freeway and Sunset Bl. Implementation is expected by February 2022.

- Significant equity benefits for transit riders on Alvarado Street (includes data from the Fall 2019 Customer Survey for Line 200 riders)
  - Over 12,000 boardings per weekday (pre-COVID) on Alvarado
  - 94% of bus riders on Alvarado do not own or have access to a car and therefore rely on Metro bus service
  - 77% of bus riders on Alvarado use Metro bus service at least five days per week

- 63% of bus riders on Alvarado are below the poverty line
- 96% of bus riders on Alvarado are people of color (POC)

In the partially completed segment of this project, Metro has seen a 13% bus speed improvement in the southbound direction during the morning bus lane hours between 7:00 AM and 10:00 AM, when comparing the month prior to implementation (May 2021) with the latest month of data as of this report (October 2021). The northbound direction during the evening bus lane hours has struggled with lower-than-expected compliance with parking restriction hours, and Metro is working with LADOT to address. Alongside LADOT, Metro staff will be reviewing more closely following the full completion of the project, pending Caltrans approval of their segment. Metro will also conduct a post-implementation onboard survey to hear from our riders.

### Grand Avenue & Olive Street Bus Priority Lanes

Following extensive stakeholder outreach during Summer and Fall 2021, these bus priority lanes were implemented in November 2021, one month earlier than anticipated, as a result of strong community and stakeholder support. Staff will conduct a post-implementation evaluation later this year.

- Significant equity benefits for transit riders on Grand Avenue and Olive Street (includes data from the Fall 2019 Customer Survey for riders on bus lines that use Grand Av and Olive St)
  - Over 120,000 boardings per weekday (pre-COVID) on Metro lines that serve Grand Ave and Olive St
  - 51% of bus riders on Grand/Olive are below the poverty line
  - 80% of bus riders on Grand/Olive are people of color (POC)
- Benefits to bus riders using routes from South LA, San Gabriel Valley and Gateway Cities
- Benefits to municipal transit operators including LADOT DASH, Foothill Transit Commuter Express and Torrance Transit 4X

### La Brea Avenue Bus Priority Lanes

Community and stakeholder outreach began in Fall 2021, with a virtual community meeting held on November 16, 2021. A Spanish-language interpreter was available for use during the meeting, and all informational materials have been provided in English, Spanish, Korean, and Russian. A mobile tech pop-up unit with laptop stations and a screen was also made available at a location near the corridor (LADOT Public Parking Lot #614) as a limited in-person event designed to provide opportunities for those without reliable internet service to participate in the virtual meeting (COVID-19 health and safety protocols were in effect and masks were required to enter the mobile unit).

- Significant equity benefits for transit riders on La Brea Avenue (includes data from the Fall 2019 Customer Survey for Line 212 riders)
  - Over 12,500 boardings per weekday (pre-COVID) on La Brea Avenue

- 76% of bus riders on La Brea Avenue do not own or have access to a car and therefore rely on Metro bus service
- 76% of bus riders on La Brea Avenue use Metro bus service at least five days per week
- 90% of bus riders on La Brea Avenue are people of color (POC)
- Benefits to riders accessing jobs, residences, and businesses along the La Brea Avenue corridor
  - Over 100,000 residents and nearly 40,000 jobs within a 10-minute walk of proposed bus priority lanes
- Provides direct connections to E Line (Expo) and future D Line (Purple) extension

Project support and endorsements have been received during this process, including from organizations such as:

- Central Hollywood Neighborhood Council
- City of West Hollywood Transportation Commission
- Greater Wilshire Neighborhood Council Transportation Committee
- Hancock Park HOA resident survey
- Mid City West Neighborhood Council
- Investing In Place
- MoveLA
- Westside/Central Regional Service Council

The outreach process is ongoing and comments received to-date are being incorporated into current design plans, with the implementation goal set for Spring 2022.

### 5<sup>th</sup> & 6<sup>th</sup> Street Bus Priority Lanes

Significant equity benefits for transit riders on 5<sup>th</sup> Street and 6<sup>th</sup> Street (includes data from the Fall 2019 Customer Survey for riders on bus lines that use these corridors)

- Over 95,000 boardings per weekday (pre-COVID) on bus lines that use 5<sup>th</sup> Street/6<sup>th</sup> Street
- 85% of bus riders on 5<sup>th</sup> Street/6<sup>th</sup> Street do not own or have access to a car and rely on Metro bus service
- 72% of bus riders on 5<sup>th</sup> Street/6<sup>th</sup> Street use Metro bus service at least 5 days per week
- 55% of bus riders on 5<sup>th</sup> Street/6<sup>th</sup> Street are below the poverty line
- 88% of bus riders on 5<sup>th</sup> Street/6<sup>th</sup> Street are people of color (POC)

Following the completion of this project, Metro re-engaged with its customers using this corridor. Over 230 bus riders were verbally asked, in English or Spanish, a series of questions regarding their experience riding buses along the corridor, where they commute to, how frequently they ride, and how the installation of bus priority lanes have affected their trip times. This survey yielded the following results:

- Over 65% of those surveyed believed their bus service was faster, with over half of this group

- stating by 6 minutes or more
- 9 in 10 riders thought bus service was more reliable with the new bus lane

### Red Paint/Thermoplastic Pilot Treatment

In partnership with the California Traffic Control Devices Committee (CTCDC), the Working Group is experimenting with partial use of red thermoplastic (more resilient than paint) to increase visibility of bus priority lanes in the pavement. Today's guidelines allow for use of red thermoplastic only if the entire lane is covered with this material, which can significantly increase cost and create public confusion about permitted use during non-bus lane hours.

In summer 2021, LADOT implemented this partial red thermoplastic treatment along portions of Wilshire Bl in Brentwood and the MyFig segment of Figueroa St approaching Downtown LA. Later in fall 2021, LADOT evaluated the effectiveness of the partial red thermoplastic treatment and saw an overall 55% decrease in non-bus vehicles using the bus priority lane, with some intersections seeing nearly 75% decrease in these types of violations.

These compelling results will be presented to the CTCDC with the intent to expand this cost-effective treatment to other bus priority lanes as part of a multipronged approach to bus priority lane compliance.

### AB917 State Legislation for Camera Bus Lane Enforcement (CBLE) Program

In partnership with LADOT, Metro's Government Relations and Office of Extraordinary Innovation (OEI), legislative authorization was passed under California Assembly Bill AB917 and signed by Governor Newsom, which takes effect in January 2022, to enforce parking violations in bus-only lanes primarily through the use of automated, on-vehicle, forward-facing cameras.

This compliance tool is currently employed on transit buses in New York City and San Francisco. The CBLE program is seen as a cost-effective and less confrontational method to ensure bus lane investments are being used as intended. Metro and LADOT are jointly developing a proof-of-concept program and will present a proposal to the Board for future consideration.

### Metro G Line (Orange) Busway Signal Improvements

In partnership with LADOT to make near term signal improvements while the gating project is still several years from completion, traffic signals along the G Line (Orange) Busway between North Hollywood and Coldwater Canyon stations have been updated with a "dwell recall" feature that allows the Busway to automatically share a green signal during the parallel through traffic movement along Chandler Bl. It is similar in concept to LADOT's Automatic Walk Signal Cycles, which no longer require a pedestrian to push a button to request the walk signal. Previously, if a person walking pushed the button midway through a green light, they could be required to wait for the next cycle to cross. Similarly, Busway traffic signals remained red until a bus would imminently approach the intersection to request its signal, even while general traffic next to the Busway flowed at normal speeds on a green light. This forced many G Line (Orange) buses to slow down and potentially added service delays while buses waited for the next cycle.

Preliminary results have shown these changes to have had the following improvements:

- 20% fewer buses stopped at traffic signals
- Over 30% reduction in delay due to red lights
- Nearly 40% bus speed improvement through intersections for buses that do not encounter a red light, allowing buses to operate at design speed more consistently

The Technical Working Group will continue to analyze this new treatment to see whether it could be expanded to other parts of the Metro system for further speed and reliability improvements.

### **EQUITY PLATFORM**

The intent of this work is to provide travel time and reliability improvements to Metro riders, systemwide of which 8 in 10 bus riders are BIPOC, nearly 9 in 10 live in households with total annual earnings below \$50,000, and nearly 6 in 10 are below the poverty line. Further, the project areas are operated by Metro lines that serve Metro's Equity Focus Communities and staff will conduct a more focused equity analysis of impacts to marginalized groups as a result of this project.

Improving transit service by reallocating priority for single occupant motorists and renewing focus on transit riders increases access to opportunity for groups who may not have those opportunities today. Further, these projects allow Metro to sustainably operate more frequent service by improving speed and reliability.

Each project includes some form of rider outreach. These projects blend a data-driven approach with customer feedback and staff will commit to centering marginalized community feedback to ensure marginalized voices are heard and equitable outcomes are reached. Projects used multilingual rider surveys conducted verbally and in written form onboard buses and at key bus stops along affected corridors, as well as recorded interviews with bus riders in which they share thoughts and feedback on the proposed projects. These survey results and recorded interviews are then incorporated into the presentations used at community meetings to ensure that riders' voices are centered throughout the ensuing discussions.

### **IMPLEMENTATION OF STRATEGIC PLAN GOALS**

Recommendations support strategic plans:

Goal #1: Provide high quality mobility options that enable people to spend less time traveling. Improving the speed and reliability of the bus network will reduce transit travel times, as well as improve competitiveness with other transportation options.

Goal #2: Deliver outstanding trip experiences for all users of the transportation system. These initiatives help to move more people within the same street capacity, where currently transit users suffer service delays and reliability issues because of single occupant drivers.

Goal #3: Enhance communities and lives through mobility and access to opportunity. With faster transit service and improved reliability, residents have increased access to education and

employment, with greater confidence that they will reach their destination on time.

Goal #4: Transform Los Angeles County through regional collaboration and national leadership. Because Metro does not have jurisdiction over local streets and arterials, collaboration with other partner agencies such as LADOT, Caltrans, City and County of Los Angeles are necessary to ensure these speed and reliability improvements are successfully implemented.

## **NEXT STEPS**

The NextGen Bus Speed Engineering Working Group will continue to discuss and analyze future corridors along key arterials for equitable opportunities and are actively collaborating with partner agencies and stakeholders. Staff plans to provide further details about these corridors in the next quarterly update in Spring 2022.

Additionally, Metro continues working with LADOT to improve existing Transit Signal Priority (TSP) and expand TSP to more buses and along non-TSP Tier 1 corridors under the NextGen Bus Plan. Today, only Metro Rapid (Red) buses receive TSP, which can extend green lights to prioritize certain buses. Given the NextGen Bus Plan to combine the best of Metro Rapid priority attributes with Metro Local access for all riders, Metro is exploring the viability to enable TSP on its entire 2,300 bus fleet and work with LADOT to increase opportunities for Metro buses to receive signal prioritization along Metro Tier 1 bus routes.

## **ATTACHMENTS**


Attachment A - Motion 22.1

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Reviewed by: Conan Cheung, Acting Chief Operations Officer, Bus (213) 418-3034



Stephanie N. Wiggins  
Chief Executive Officer



## Board Report

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**File #:** 2019-0572, **File Type:** Motion / Motion Response

**Agenda Number:** 22.1

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### REGULAR BOARD MEETING JULY 25, 2019

#### Motion by:

#### **DIRECTORS BONIN, GARCETTI, KREKORIAN, SOLIS AND GARCIA**

Related to Item 22: NextGen Bus Speed Engineering Working Group

In June 2018, the Metro Board endorsed speed, frequency, and reliability as the highest priorities for Metro's bus service in the NextGen Bus Study. In recent years, the primary contributor to slow speeds and poor schedule reliability has been growing traffic congestion on city streets. This congestion directly increases Metro's operating costs and reduces the quality of the service that Metro can afford to provide. Providing high-quality transit options with competitive travel times is the single most important step Metro can take to retain and grow ridership, increase the carrying capacity of local roadways, and shift regional travel patterns toward more efficient modes. These goals are essential components of both Metro's Vision 2028 Strategic Plan and the City of Los Angeles' Mobility Plan 2035 and Sustainable City pLAN.

The phenomenon of traffic congestion impeding mass transit operations is particularly acute in Downtown Los Angeles and nearby neighborhoods -- and the experience of the recent Flower Street pilot bus lane has demonstrated the effectiveness of strategic bus-supportive infrastructure in allowing transit riders to bypass congestion. Other types of bus-supportive infrastructure may include queue jumpers, signal priority, or boarding islands. Combined with operational improvements like All Door Boarding, these types of infrastructure improvements can cut stop times and improve bus speeds by 20% or more.

Metro buses operate on streets controlled by local jurisdictions. Therefore, close coordination between Metro and local agency partners is essential to successfully implement infrastructure changes. A working group is needed to ensure close coordination between Metro's Operations Department and city transportation agencies.



**SUBJECT: NEXTGEN BUS SPEED ENGINEERING WORKING GROUP**

APPROVE Motion by Directors Bonin, Garcetti, Krekorian, Solis and Garcia that the Board direct the CEO to:

- A. Develop a list of priority bus-supportive infrastructure projects needed to support the NextGen bus service plan, with an emphasis on near-term improvements that can be implemented concurrently with each phase of NextGen;
- B. Form a NextGen Bus Speed Engineering Working Group co-chaired by the Metro CEO and the General Manager of the Los Angeles Department of Transportation, or their designees, and establish a regular meeting schedule, at least monthly;
- C. Assess the need for coordination with additional local jurisdictions and municipal operators where bus delay hotspots exist; and
- D. Report back to the Operations, Safety, and Customer Experience Committee on the above in October 2019, and quarterly thereafter.

ITEM 22



# NEXTGEN Bus Plan

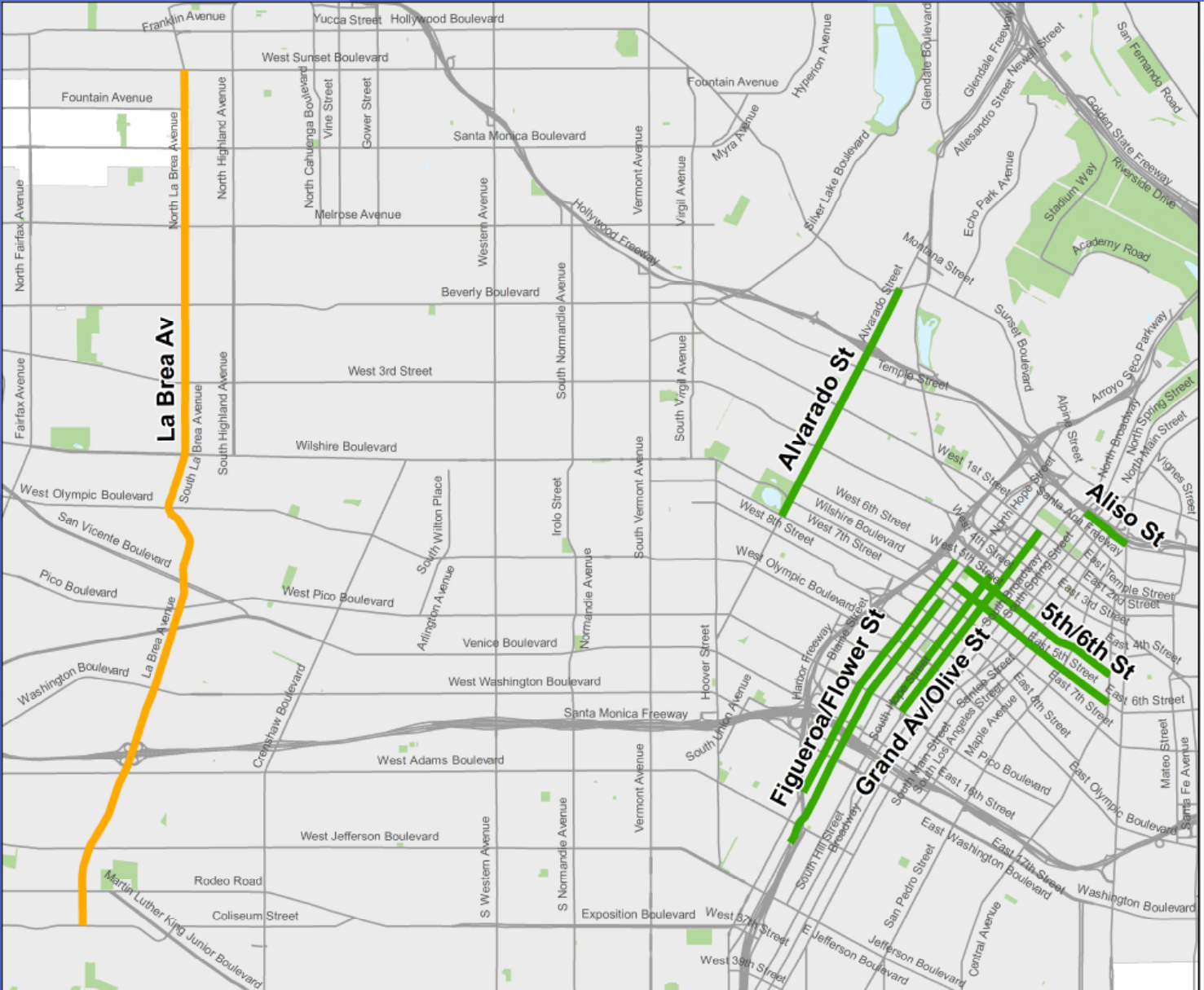
Bus Speed Engineering  
Working Group Update



Metro

JANUARY 20, 2022

# Project Map

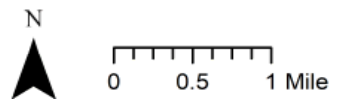


## Bus Lane Projects

DRAFT, 12/13/2021

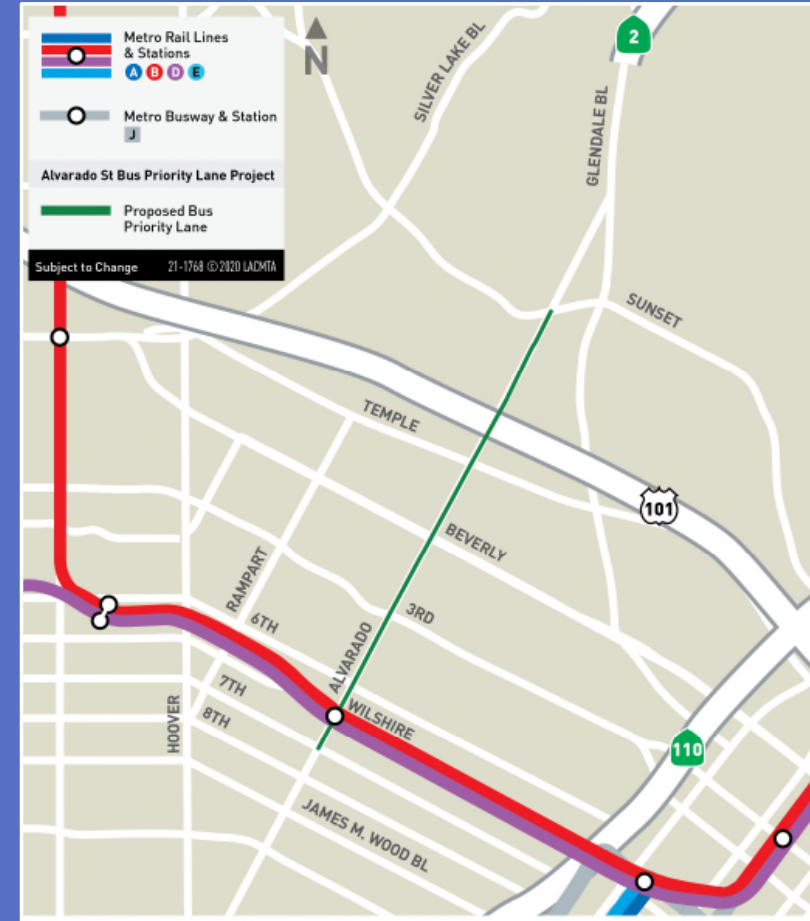
### Bus Lanes

- Completed Corridors
- In-Progress Corridors



# Alvarado St Peak Bus Priority Lanes

- Southern segment (LADOT) showing 13% bus speed improvement during morning period (May vs. Oct 2021)
- Northern segment anticipated February 2022, pending Caltrans approval



# Grand Av-Olive St Bus Priority Lanes

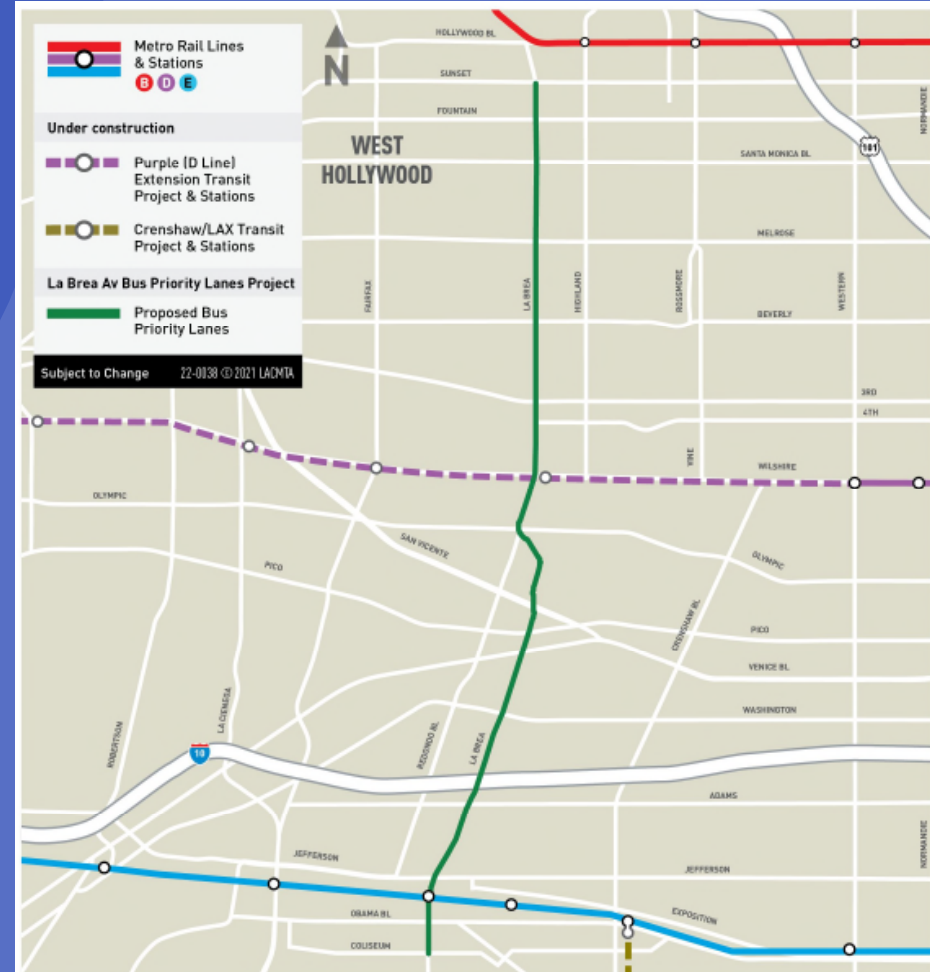


- Completed November 2021, one month ahead of schedule
- Staff will conduct a post-implementation evaluation



# La Brea Av Peak Bus Priority Lanes

- Community and stakeholder outreach began Fall 2021
- Virtual community meeting held November 16, 2021
- Mobile pop-up outreach unit was available during meeting
- Project support and endorsements from:
  - Central Hollywood Neighborhood Council
  - Mid City West Neighborhood Council
  - Greater Wilshire Neighborhood Council
  - Hancock Park HOA Residents Survey
  - City of West Hollywood Transportation Commission
  - Investing in Place
  - MoveLA
  - Westside/Central Regional Service Council
- Plan to incorporate input to open in Spring 2022



# Red Paint / Thermoplastic Pilot

- Metro, LADOT & CTCDC (California Traffic Control Devices Committee) partnering to experiment partial use of red thermoplastic to increase visibility of bus priority lanes
- Pilots implemented on Wilshire Bl in Brentwood & MyFig segment of Figueroa St in Downtown LA
- Overall, 55% reduction in non-bus vehicles using bus lane, with some intersections with nearly 75% reduction in improper usage
- Requesting CTCDC to expand pilot to other corridors as part of multipronged approach to bus priority lane compliance



# G Line (Orange) BRT Signal Improvements

- Busway traffic signals between North Hollywood & Coldwater Canyon updated with “dwell recall” feature
- Similar to LADOT’s Automatic Walk Signal Cycles, this allows Busway to automatically share a green signal during the parallel through traffic movement along Chandler Bl
- Preliminary results show improvements:
  - 20% fewer buses stopped at traffic signals
  - Over 30% reduction in delay due to red lights
  - Nearly 40% bus speed improvement through intersections for buses that do not encounter a red light
- Looking to expand to other parts of the Metro system for further speed and reliability improvements





# Looking Ahead

- Working Group continues to discuss and analyze future corridors for equitable opportunities with ongoing collaboration among partner agencies and stakeholders
- Conducting post-implementation surveys on recently completed projects
- AB917 State Legislation for Camera Bus Lane Enforcement (CBLE) Program
  - Currently employed on transit buses in SF and NYC
- Next quarterly report expected in Spring 2022

