



**Board Report**

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**PLANNING AND PROGRAMMING COMMITTEE  
SEPTEMBER 16, 2020  
EXECUTIVE MANAGEMENT COMMITTEE  
SEPTEMBER 17, 2020**

**SUBJECT: 2020 LONG RANGE TRANSPORTATION PLAN REQUEST FOR ADOPTION**

**ACTION: APPROVE ADOPTION OF 2020 LONG RANGE TRANSPORTATION PLAN**

**RECOMMENDATION**

CONSIDER:

APPROVING the following:

- A. ADOPT the 2020 Long Range Transportation Plan; and
- B. APPROVE the development of a Short Range Transportation Plan, to include a strategic project list.

**ISSUE**

The 2020 Long Range Transportation Plan (“2020 LRTP”, Attachment A) details how Metro plans, builds, operates, maintains and partners for improved mobility in the next 30 years. Given the challenges facing Los Angeles County, there is also a compelling opportunity to demonstrate the long-term benefits of bold policies to address the need for improved access to opportunity and a more sustainable future.

**BACKGROUND**

Metro must adopt a financially constrained LRTP in order to remain eligible to receive federal and state funding. In September 2017, staff began work to update the 2009 LRTP, following the passage of Measure M, and in alignment with the Southern California Association of Governments (SCAG) process for updating the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Metro’s LRTP demonstrates how Los Angeles County transportation projects conform with the state and federal air quality mandates for funding eligibility. The technical detail for the 2020 LRTP is included in the 2020 LRTP Technical Document (Attachment B).

## **DISCUSSION**

### Strategies

The main strategy areas for the 2020 LRTP are: Better Transit; Less Congestion; Complete Streets; and Access to Opportunity. The projects, programs and policies that support and advance these strategies are detailed within the document. Together, these efforts will increase transit ridership and improve air quality.

The 2020 LRTP is a funded plan and forecast that examines how Metro's future transportation investments can be leveraged to achieve maximum mobility benefits for all of Los Angeles County. Building infrastructure will create economic benefits, but the LRTP also looks to maximize the mobility benefits, the environmental benefits, and the benefits of improved opportunities access. To do this, the LRTP emphasizes bold policies and close partnerships to incentivize more efficient use of the transportation system.

### Public Engagement

The Board approved the release of the Draft 2020 Long Range Transportation Plan (Draft 2020 LRTP) for public review and comment in May 2020. The forty-five (45) day public comment period ended July 13, 2020.

Staff conducted extensive public outreach in unprecedented pandemic conditions. All public meetings were virtual, and a live webinar was also recorded for on-demand streaming. Additional efforts were made to reach the public as directly as possible. The public engagement effort, detailed in Attachment B (p.6) includes:

- Metro's most successful Telephone Town Hall, which contacted 100,000 individual telephone numbers;
- More than 23,000 postcards mailed to Equity Focus Communities;
- More than 15 million social media and online advertising impressions, the majority of which targeted underserved communities;
- Almost 2.5 million direct emails; and
- Printed posters on all bus and rail lines.

These efforts resulted in more than 130,000 visits to the 2020 LRTP and related information at OurNext.LA. The comments received through the website or submitted directly to Metro have been addressed and incorporated where appropriate. The comments received and corresponding responses are included as Attachment C.

The majority of public comments can be summarized in the following topic areas:

- Strong support for expanded transit;
- Safety and security recommendations;
- Homelessness concerns;
- Support for roadway enhancements;
- Support for active transportation and complete streets;



- Concern about the implications and unknowns surrounding COVID-19;
- Many project-specific comments and requests (e.g., projects completed sooner, alignment comments, etc.);
- Comments about modal prioritization and regional prioritization of funding;
- Comments about equity; and
- Comments about fare policy and congestion pricing.

Comments from public agencies were similar, but were primarily focused on:

- Future funding questions; and
- Future strategic project recommendations.

### L RTP Supplemental Information

In response to the comments received, the L RTP was revised to include additional detail and refinements. An index of those changes is included as Attachment D.

### Technical Document

The L RTP Technical Document (Attachment B) contains a variety of data and additional detail for the actions and assumptions in the 2020 L RTP. Some of the elements the Technical Document provides include: public engagement metrics; project and program descriptions; subregional demographics and travel patterns; travel demand model analysis and assumptions; performance measures; and financial forecast details and assumptions.

### Equity Platform

The 2020 L RTP was developed through extensive public engagement based on the “Listen and Learn” pillar of the Equity Platform. The L RTP was drafted during 2 years of continuous public engagement, which included more than 100 community events and public meetings, and more than 60,000 survey responses and priority rankings. Following the release of the draft L RTP, staff continued to engage stakeholders throughout the County (Attachment B, p. 12).

The remaining three pillars are all addressed within the 2020 L RTP, including but not limited to: Define and Measure, through the Equity Focus Community metrics; Focus and Deliver, through the program and project actions; and Train and Grow, in Metro’s ongoing efforts to expand opportunities for access across all facets of Metro’s roles (e.g., employer, builder, partner, funder, etc.). The 2020 L RTP also introduced Metro’s definition of Equity, and related action items, as part of the public comment period for the draft L RTP.

### **DETERMINATION OF SAFETY IMPACT**

This item does not have a direct impact on safety, but it does address Metro’s commitment to improve safety.

## **FINANCIAL IMPACT**

This item has no fiscal impact to the agency.

### **Impact to Budget**

Activities associated with completing the LRTP update are budgeted in the current fiscal year and are within budget. The financially constrained plan is aligned with the FY21 budget and will be recalibrated with future Board actions.

## **IMPLEMENTATION OF STRATEGIC PLAN GOALS**

The 2020 LRTP includes and advances all five goals of Vision 2028, which calls for the LRTP to “operationalize” its strategic plan initiatives. The LRTP relationship to Vision 2028 is described in Figure 7 of the 2020 LRTP (Attachment A, p.25). Most specifically, the LRTP advances the performance outcome from the Strategic Plan of increasing all non-solo driving mode share. The LRTP provides strategies that would increase transit trips up to 81%.

## **ALTERNATIVES CONSIDERED**

The Metro Board can choose to delay adoption of the 2020 LRTP and continue to use the 2009 LRTP. However, to ensure that the public engagement effort remains relevant, timely with SCAG’s RTP/SCS development, and consistent with stakeholder input and the Equity Platform, the Board should consider adopting as soon as possible. This would allow staff to move forward and focus on the development of a shorter term action plan, based on the LRTP priorities.

## **NEXT STEPS**

After the recommended adoption of the 2020 LRTP, staff will begin work on an action plan, in the form of a Short Range Transportation Plan (SRTP). The SRTP would recommend near-term implementation steps over a ten-year timeframe and allow for any needed recalibrations from the current COVID-19 pandemic.

One of the comments received from several agencies was the need to add strategic projects (Attachment C). The first steps of the SRTP effort will be reassessing the financial forecast for the short-term horizon, and engaging partners on their strategic project needs to create a strategic project list.

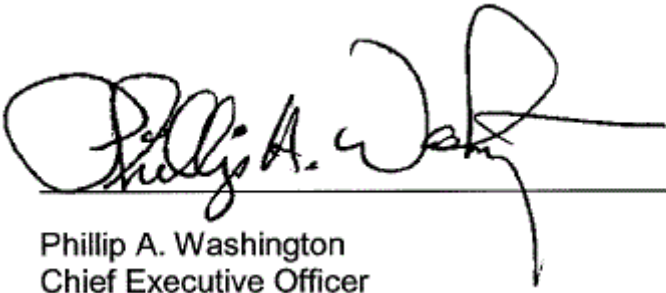
## **ATTACHMENTS**

Attachment A - 2020 Long Range Transportation Plan  
Attachment B - 2020 LRTP Technical Document  
Attachment C - LRTP Public Comment Response Matrix  
Attachment D - Summary of Draft LRTP Revisions

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Phillip A. Washington  
Chief Executive Officer

# **Attachment A**

## **2020 Long Range Transportation Plan**



**Metro**<sup>®</sup>

**We have a plan for  
OUR NEXT LA\*.**

**2020 Long Range Transportation Plan**



DRAFT

Conceptual Illustration of Plan Elements

*\*By LA, we mean all 88 cities, unincorporated areas and hundreds of neighborhoods, in LA County.*



*We have a Plan*  
for a future  
where we spend  
less time in traffic,  
and less of us  
drive alone.

**OUR NEXT LA\***  
provides a  
detailed roadmap  
for the journey.

# *Improving mobility is complicated.*

That's why our plan weaves efforts across four priorities:

We envision *better transit*, with seamless trips for riders travelling across LA to learn, work or play.

Our vision is *less congestion*, where traffic flows more freely and travel times are more certain.





We will team up to make ***complete streets***, which are safer and more accessible for everyone.

We will increase ***access to opportunity*** to better connect everyone to what they need most.

DRAFT








All these solutions work together,  
but we cannot achieve them alone.  
We need every Angeleno to partner  
with us in this effort.

DRAFT



North Hollywood



*Together, we can  
make real change.*

DRAFT



# Letter from the CEO

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Dear Friends,

**The Long Range Transportation Plan (LRTP) provides the funding plan and bold policies needed to move us forward to a future LA County that is environmentally and economically sustainable, while continuing to reduce congestion. We are still learning from the current pandemic, but the need for specific long-term and near-term action plans has never been more apparent.**

We must seize this opportunity to pursue a more sustainable future by taking steps now to manage the capacity and improve the effectiveness of our transportation system. Metro's LRTP details how Metro will work toward elevating the quality of our services and the reach of our transportation system, to make them better for everyone.

The benefits of improved mobility are greater access to opportunities for all, including jobs, education, housing and health care – essential elements for a higher quality of life. The responsibility for improving mobility in our region is at the core of Metro's 30-year LRTP, as is our commitment to improving equity through these efforts.

The LRTP provides a balanced, comprehensive approach by considering the mobility needs of everyone in LA County, and matches those access needs with Metro's expected resources to transform our transportation future. As Metro continues to implement the largest transportation expansion program in the country – thanks to Measure M – we also face the need to improve the quality of our existing services and leverage all modes in our system for more reliable, convenient and safe travel anywhere in the county.

Southern California's transportation challenges require bold leadership and action. Metro's LRTP establishes unprecedented levels of commitment to mobility improvement and innovative approaches to address our current and future needs. Solutions for complex problems require a collaborative approach from everyone in the region, including each of you. Please consider the LRTP an invitation to everyone in LA County to join us in moving toward a better mobility future.

Sincerely,



Phillip A. Washington  
*Chief Executive Officer*





# What is COVID-19 teaching us?

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**In March 2020, as the LRTP was being prepared for public release, the United States went into quarantine in response to the COVID-19 pandemic. The pandemic has reshaped all aspects of our lives, including how we work and travel, but the long-term impacts are unknown. Future updates to the LRTP and the forthcoming Short Range Transportation Plan (SRTP) will explore some of the current uncertainties, including:**

## **Financial**

Metro will continue to prioritize financial stability throughout and beyond the pandemic. COVID-19 brought a reduction in sales tax receipts and fare revenues; however, Metro remains committed to the safety of our drivers and riders. As of June 2020, Metro estimated a \$1.8 billion gap in funding from combined decreases in sales tax, fare revenue, and toll revenue, as well as increased operating expenses, but is also anticipating more than \$1 billion in financial support from the federal government through the CARES Act for LA County. Though it is still unknown how long the pandemic will impact the operations of Metro and the economy as a whole, Metro is continuously seeking innovative ideas, operational efficiencies and value engineering to improve our financial stability.

## **Travel Behavior**

While the LRTP recognizes that there are major challenges facing our region, such as climate change, a housing crisis and congestion, the pandemic presents a unique opportunity to reposition our priorities and future actions. The pandemic has shown us how significant change can also result in potential benefits, when we look at reduced traffic. COVID-19 forced companies to re-examine remote working as a functional, healthy alternative in many industries. Continuing to promote telecommuting and/or other flexible transportation solutions will help sustain the congestion reduction and air quality benefits we are currently experiencing.

## **Operational**

Metro's transit system saw an immediate reduction in ridership at the onset of the pandemic and the Stay At Home orders. When the Stay At Home restrictions began in March 2020, Metro deployed operational changes, such as providing a modified Sunday schedule to respond to reduced ridership, adding 60-foot buses for more capacity, increased cleaning and sanitizing of vehicles at the start and end of every revenue service, and introducing 20-minute headways during evening hours on Metro's rail system. By Summer 2020, Metro returned to roughly 50% of its previous ridership, and plans a phased return to full transit operations. However, the long-term impacts of the pandemic will continue to evolve.

While the pandemic has brought immediate changes and will have some unknown lasting impacts, the LRTP is a 30-year plan with a broad vision and strategies that are flexible and responsive to future challenges facing the region. The LRTP is a living document that will be amended to include any Board adopted recovery initiatives, as well as any financial forecast updates. Once adopted, Metro will look to a more detailed snapshot of the next decade with an SRTP focused on the immediate challenges for LA County.







*better transit*

p26

*less congestion*

p40

*complete streets*

p54

*access to  
opportunity*

p64

DRAFT



# Table of Contents

<b>Introduction</b>	<b>3</b>	<b>Tables and Charts</b>	
Letter from the CEO	8	<i>Figure 1</i>	<b>LA County Projected Regional Growth</b> 14
What is COVID-19 teaching us?	10	<i>Figure 2</i>	<b>Emissions from Metro Operations</b> 17
<b>Challenges &amp; Opportunities</b>	<b>14</b>	<i>Figure 4</i>	<b>Elements of the 2020 LRTP</b> 21
We must respond to the challenges of today <i>and</i> tomorrow.	14	<i>Figure 5</i>	<b>Benefits of the 2020 LRTP</b> 22
Therefore, let us be bold.	16	<i>Figure 6</i>	<b>Potential Increase in Daily Transit Trips</b> 23
Metro will lead the way.	18	<i>Figure 7</i>	<b>Metro’s Framework for Improving Mobility in LA County</b> 25
<b>LRTP Elements, Benefits &amp; Priorities</b>	<b>20</b>	<i>Figure 8</i>	<b>Transit Corridor Investment</b> 30
We’ve built a multi-layered, responsive plan.	20	<i>Figure 10</i>	<b>Daily Transit Trips</b> 38
Benefits at a Glance	22	<i>Figure 11</i>	<b>Transit Mode Share for Commute Trips</b> 38
Metro’s Plan guides our priorities.	24	<i>Figure 12</i>	<b>Percent of Households within a 10-minute Walk or Roll of Fixed Guideway Transit</b> 39
<b>Our Next LA* is better transit.</b>	<b>26</b>	<i>Figure 14</i>	<b>Highway Corridor Investment</b> 44
Transit Investment	30	<i>Figure 16</i>	<b>Annual Vehicle Miles Traveled Per Capita</b> 52
Strategies & Actions	32	<i>Figure 17</i>	<b>Annual Vehicle Hours of Delay Per Capita</b> 52
Performance Measures	38	<i>Figure 18</i>	<b>Average Morning Travel Time</b> 53
<b>Our Next LA* is less congestion.</b>	<b>40</b>	<i>Figure 20</i>	<b>Annual Million Metric Tons of CO<sub>2</sub> Equivalent</b> 62
Highway Investment	44	<i>Figure 21</i>	<b>Annual Tons Particulate Matter (PM<sub>10</sub>)</b> 62
Strategies & Actions	46	<i>Figure 24</i>	<b>Net Jobs Created and Increase in Gross Regional Product</b> 74
Performance Measures	52	<i>Figure 25</i>	<b>Percent of Activity Centers and Jobs within a 10-minute Walk or Roll of Fixed Guideway Transit</b> 75
<b>Our Next LA* is complete streets.</b>	<b>54</b>	<i>Figure 26</i>	<b>Countywide Uses and Sources of Transportation Funding</b> 77
Active Transportation	56	<i>Figure 27</i>	<b>Local Return Funding</b> 79
Strategies & Actions	58	<i>Figure 28</i>	<b>Multi-year Subregional Program Funding</b> 79
Performance Measures	62	<i>Figure 29</i>	<b>Transit Operations and SGR</b> 81
<b>Our Next LA* is access to opportunity.</b>	<b>64</b>	<i>Figure 30</i>	<b>Freeway Operations and SGR</b> 81
Equity Focus Communities	66	<b>Maps</b>	
Strategies & Actions	68	<i>Figure 3</i>	<b>LA COUNTY FIXED GUIDEWAYS</b> 18
Performance Measures	74	<i>Figure 9</i>	<b>PLANNED TRANSIT PROJECTS</b> 31
<b>Funding a Transportation Revolution</b>	<b>76</b>	<i>Figure 13</i>	<b>EXPRESSLANES STRATEGIC NETWORK</b> 43
Supporting Our Partners	78	<i>Figure 15</i>	<b>PLANNED HIGHWAY PROJECTS</b> 45
Operations & Maintenance	80	<i>Figure 19</i>	<b>ACTIVE TRANSPORTATION CORRIDOR PROJECTS</b> 57
<b>Bold New Policies &amp; Programs</b>	<b>82</b>	<i>Figure 22</i>	<b>METRO DESIGNATED EQUITY FOCUS COMMUNITIES</b> 67
Plans for today, and the decades to come.	84	<i>Figure 23</i>	<b>JOINT DEVELOPMENT PROJECTS</b> 71

# We must respond to the challenges of today *and* tomorrow.

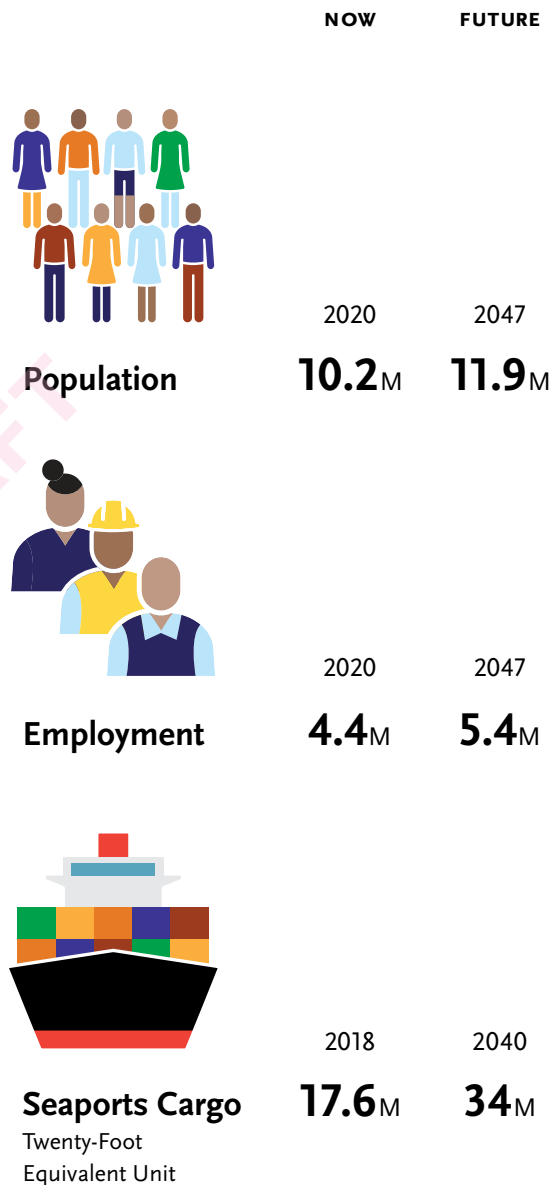
In 2020, LA County is at a pivotal point in its history. We have made great strides in economic development and community revitalization, welcomed new sports teams and stadiums, and attracted the 2028 Olympics and other major events. However, our region faces many challenges in the years ahead, including reducing roadway congestion, increasing transit ridership, adapting to and mitigating the impacts of a changing climate, tackling the housing crisis and improving quality of life in our communities. Furthermore, recent events have highlighted the significant regional impact that unforeseen events, such as the COVID-19 pandemic, can have on our regional transportation system, economy and financial outlook. Metro will respond to this and any future crisis to prioritize public health and safety, while implementing lessons learned to continually provide better mobility with less congestion.

One thing is certain: a reliable, high-quality transportation system is crucial to LA County’s economic recovery, continued prosperity and quality of life. The challenge of efficiently moving people and goods takes on particular significance in LA County, given its vast geographic scale and longstanding association with the automobile. Few issues will be more important in shaping our region’s future and sustaining its incredible economic and social promise than our collective ability to marshal the resources and the political will to implement transportation solutions that successfully meet LA County’s mobility needs, now and in the future.

Metro’s mission is to provide a world-class transportation system that enhances quality of life for all who live, work and play within LA County (Vision 2028 Strategic Plan). As its Regional Transportation Planning Agency, Metro has the unique opportunity and responsibility to evolve the LA County transportation system to better serve its residents and visitors, and to maximize economic, mobility, safety, environmental and quality of life benefits.

Figure 1

## LA County Projected Regional Growth



## LA County at a Glance

LA County is home to more than

**10 million people**

– the most populous county in the United States.

Metro operates the

**3rd largest transit system**

in the nation, with more than

**1.2 million daily boardings.\***

LA County's transit providers operate

**over 7,000 buses**

and serve approximately

**1.6 million daily  
bus passengers.\***

Metro's **1,433** square-mile transit  
service area fits the combined land areas of:

Boston  
Dallas  
Denver  
New Orleans  
New York City  
Philadelphia  
Portland  
San Francisco  
Seattle  
and Washington DC

In addition to Metro,

**16 municipal bus operators**

and **42 local operators**

serve LA County residents.

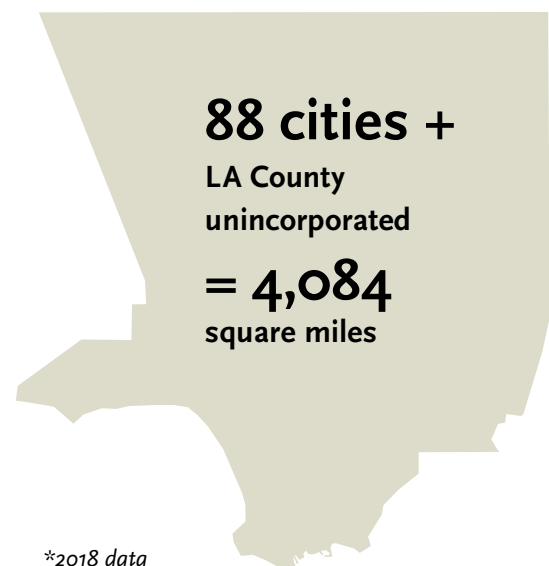
Metro Rail and Metrolink trains carry over

**340,000 daily passengers**

on **300 miles of rail**

in LA County\*.

LA County has close to **22,000 miles**  
**of highways, arterials, and**  
**local roadways.**



# Therefore, let us be bold.

To that end, this Long Range Transportation Plan (2020 LRTP) will outline what Metro is doing currently and what Metro must do for LA County. Current challenges present great opportunities for Metro to take bold action and help achieve our vision for the region.

## A Growing County

LA County is home to many of the nation's most congested highway corridors. Its population is expected to grow by approximately 1.7 million by 2047, increasing the number of people and volume of goods traveling on an already strained transportation network. Furthermore, while LA County is fortunate to have dedicated local funding sources, system needs still exceed available financial resources, and Metro must assess our priorities and determine what is most essential.

## Changing Mobility Needs and Preferences

Our transportation system must remain resilient to evolving demographic and consumer demands, changes to the delivery of goods and services, and other unforeseen challenges that lie ahead. For example, as the population ages, older people have different needs for access than younger people, while younger people tend to have different expectations about the use of technology for their transportation choices.

## Technological Change

Over the coming decades, new technologies will change the way we access goods and services, reshaping our mobility landscape, and affecting our travel preferences and expectations. For example, the widely anticipated advent of connected and autonomous vehicle technology presents possibilities for safer, more efficient vehicle travel, but raises equity concerns and could exacerbate dependency on auto travel if not properly regulated. Metro is well positioned to harness the power of private sector technology innovations to enhance customer experience by offering new mobility services, integrating and optimizing the design of vehicles and infrastructure, and increasing overall system efficiency to better serve the mobility needs of all users.





## Equitable Access to Opportunity

Disparities in transportation access, mobility, economic prosperity, health, safety and environmental quality persist across racial and socioeconomic lines. Historically, transportation policies and investments in LA County have prioritized single-occupant vehicle (SOV) travel over more affordable, high-quality mobility alternatives. Furthermore, consistently rising housing costs are pushing many workers farther away from their jobs, imposing added strains on the transportation system and affecting quality of life for those impacted. The result is an inequitable transportation system that exacerbates the divide between those who have the access and means to drive and those who do not, while providing inadequate options for both groups. The transportation system must provide access to safe, reliable and affordable travel options to those who need it most. Historical decision making has resulted in the current disparities; there is an opportunity now for Metro to coordinate investments in the communities with the greatest needs.

## Adapting to a Changing Environment

Southern California is continuing to face the threats of a changing climate, including increasingly frequent and severe fires, mudslides, rising urban temperatures, and the associated impacts on the public health and livelihood of our residents. California is a national leader in addressing climate change; however, emissions from the transportation sector are still a major source of greenhouse gas (GHG) emissions (nearly 40%). Metro must lead LA County in reducing GHGs, through programs to electrify our bus fleet and promote low carbon transportation options. Furthermore, we must improve the sustainability and resiliency of our transportation system, through active asset management, lifecycle cost analysis for transportation projects and proactive planning for severe climate events.

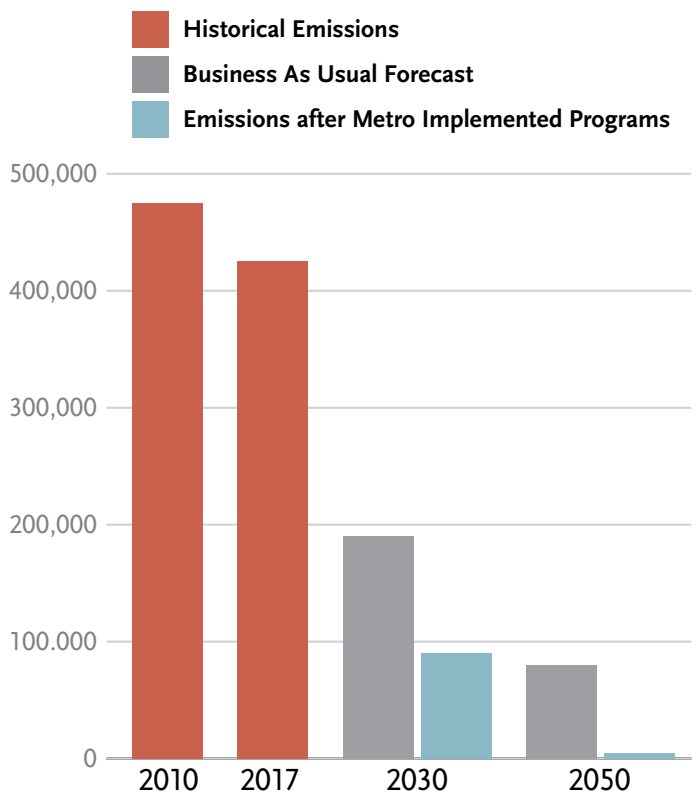
### Metro commits to reducing our agency greenhouse gas emissions:

- > **by 79%** (relative to 2017 levels) **by 2030**
- > **by 100%** (i.e., zero emissions) **by 2050**

Figure 2

### Emissions from Metro Operations

Metric tons of carbon dioxide equivalent



Source: Climate Action and Adaptation Plan (2017)



# Metro will lead the way.

Over the coming decades, Metro will be faced with numerous, complex decisions about how to address these challenges. Significant investments are needed to maintain our aging roadway and transit systems, while managing and modernizing the system to prioritize safe and reliable transportation services. The 2020 L RTP details how Metro plans, builds, manages, and maintains LA County's transportation system, and how we partner to deliver on our promise to the residents and visitors to the region.

## How We Plan and Build

Metro is the planner, designer and builder of Southern California's most expansive public transit network. Bolstered by voter-approved ballot measures, Metro has constructed roughly 130 miles of fixed-guideway transit in the past 40 years. The 2020 L RTP will add more than 100 miles over the next 30 years, the most aggressive transit expansion plan in the nation. Beyond transit, Metro will invest in arterial and freeway projects to reduce congestion, such as the I-5 North Capacity Enhancements project, and bicycle and pedestrian projects to provide alternative transportation modes, such as the LA River Path and Active Transportation Rail to Rail Corridor. Through these investments, Metro will enhance regional mobility, support economic recovery and promote sustainability through green construction practices.

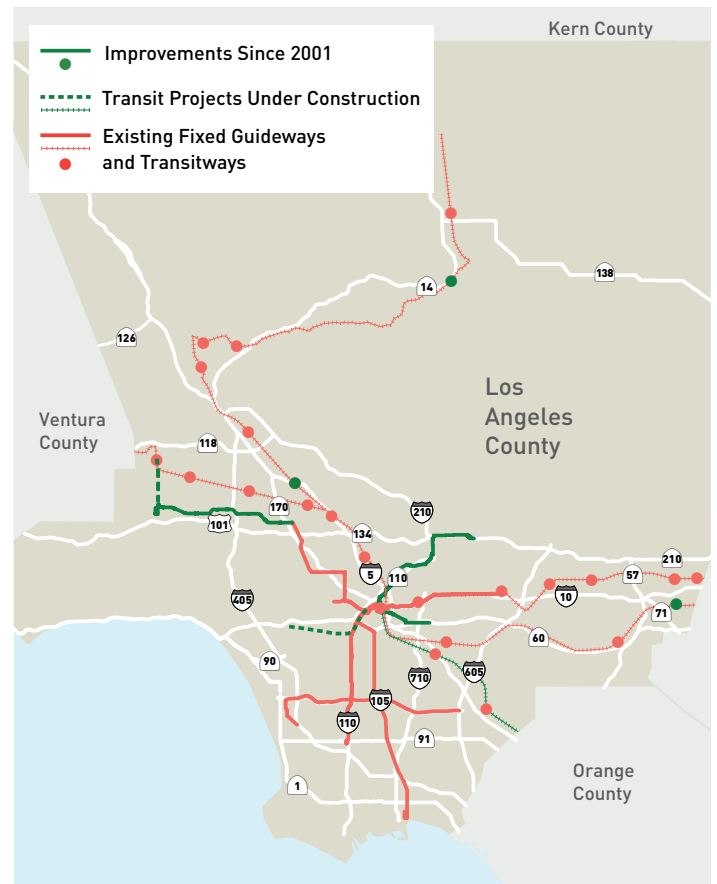
Figure 3

## LA COUNTY FIXED GUIDEWAYS: 1980—PRESENT

1980



2009



## How We Manage

In many cases, it is not possible to build the additional capacity necessary to address the constraints on the transportation system. A functioning highway network is an essential component of an effective transportation system. There is limited space to expand roads, and while fixing bottlenecks has alleviated congestion in places, adding more general-purpose freeway lanes is often an expensive and disruptive option that will not solve congestion as the county continues to grow. Therefore, Metro must ensure that the regional transportation system is managed effectively through active corridor monitoring and operations. Working with our partners, we promote policies and programs, such as congestion pricing, integrated corridor management and parking management strategies, that allow us to better utilize space to transport more people to more destinations. We will continue to build out a network of ExpressLanes to improve reliability on our freeways. Since the 2009 Long Range Transportation Plan, we have opened 96 miles

### 2020



along two ExpressLanes corridors. Over the next decade, Metro will introduce an additional 210 miles of ExpressLanes on four additional corridors. We will continue to prioritize bus travel and provide dedicated space on arterial corridors, such as the Wilshire Boulevard and Flower Street bus lane projects, and work to implement the recommendations of the NextGen Bus Plan. Furthermore, we will invest in technology and promote innovative new mobility options, such as carsharing, micro mobility, mobility on demand (MOD), microtransit (Metro Micro), Mobility as a Service (MaaS), connected and autonomous vehicles and freight-focused technologies. We will assess current and new pricing models to develop a simplified, equitable, fiscally sustainable, system-wide approach to pricing while also providing better mobility and security for all users across Metro's portfolio of transportation services.

## How We Maintain

In addition to building and managing, Metro is taking steps to continuously maintain and upgrade the multimodal system and enhance its quality and safety. While Metro's transit system is newer than other peer agency systems, its rehabilitation and replacement needs will continue to grow. In 2019, Metro completed the New Blue Improvements Project, which rehabilitated Metro's oldest rail line, the A Line (Blue) between Long Beach and downtown Los Angeles. Our investment plan includes over \$200 billion for operations and state of good repair, as well as \$38 billion in funding that returns to local agencies to maintain their local transportation system. Maintaining the system also includes upgrading and modernizing the system to enhance our customer experience and improve safety. Metro will continue to invest in technology, amenities, safety improvements and other system enhancements to create a world-class transportation system.

## How We Partner

Metro relies on continuous coordination and meaningful partnerships with local, state and federal agencies, the private sector and all local stakeholders. These partnerships are crucial for funding and delivering projects and for coordinated planning on issues of regional significance as well as local importance. Being responsive to the diverse needs of our many stakeholders would not be possible without these essential partnerships. Metro will increase collaboration with local jurisdictions to support transit priority on local roadways, to improve first/last mile access to transit, to improve local mobility and to realize transit-oriented communities.

# We've built a multi-layered, responsive plan.

We collected surveys and visited communities all over the county.

## Our Next LA\* community engagement included:

- > 77 community events
- > 38 public meetings
- > 20,000 survey responses
- > 48,000 completed priority rankings

The recommendations included in the 2020 LRTP are built on a two-year outreach effort that included surveys, meetings, and engagement throughout LA County. It includes all major transit and highway projects with committed funding or partially committed funding, existing programs and policies, collaboration with our partners, and new policies and initiatives to achieve our regional goals. The financial commitments of the 2020 LRTP, including Measures M and R, provide a foundational investment with broad mobility and sustainability benefits.

These commitments were previously established in collaboration with our local partners. Metro intentionally employed an extensive bottoms-up approach with subregional partners, to ensure that Measure M was shaped by their local project priorities.

The LRTP maximizes these benefits through the addition of **expanded programs**, such as ExpressLanes, off-peak transit services and active transportation network expansion; **partnerships** to enhance transit, active travel, goods movement, and community development; and **bold policies**, such as reduced transit fares, a reimagined bus system and congestion pricing. Together, the committed capital program and these expanded programs, partnerships and policies represent a bold but achievable vision for our future system (figure 4).

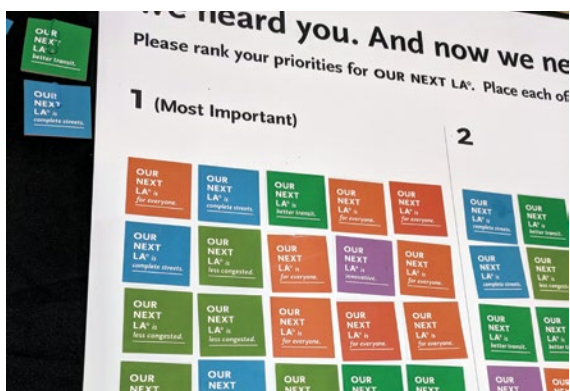
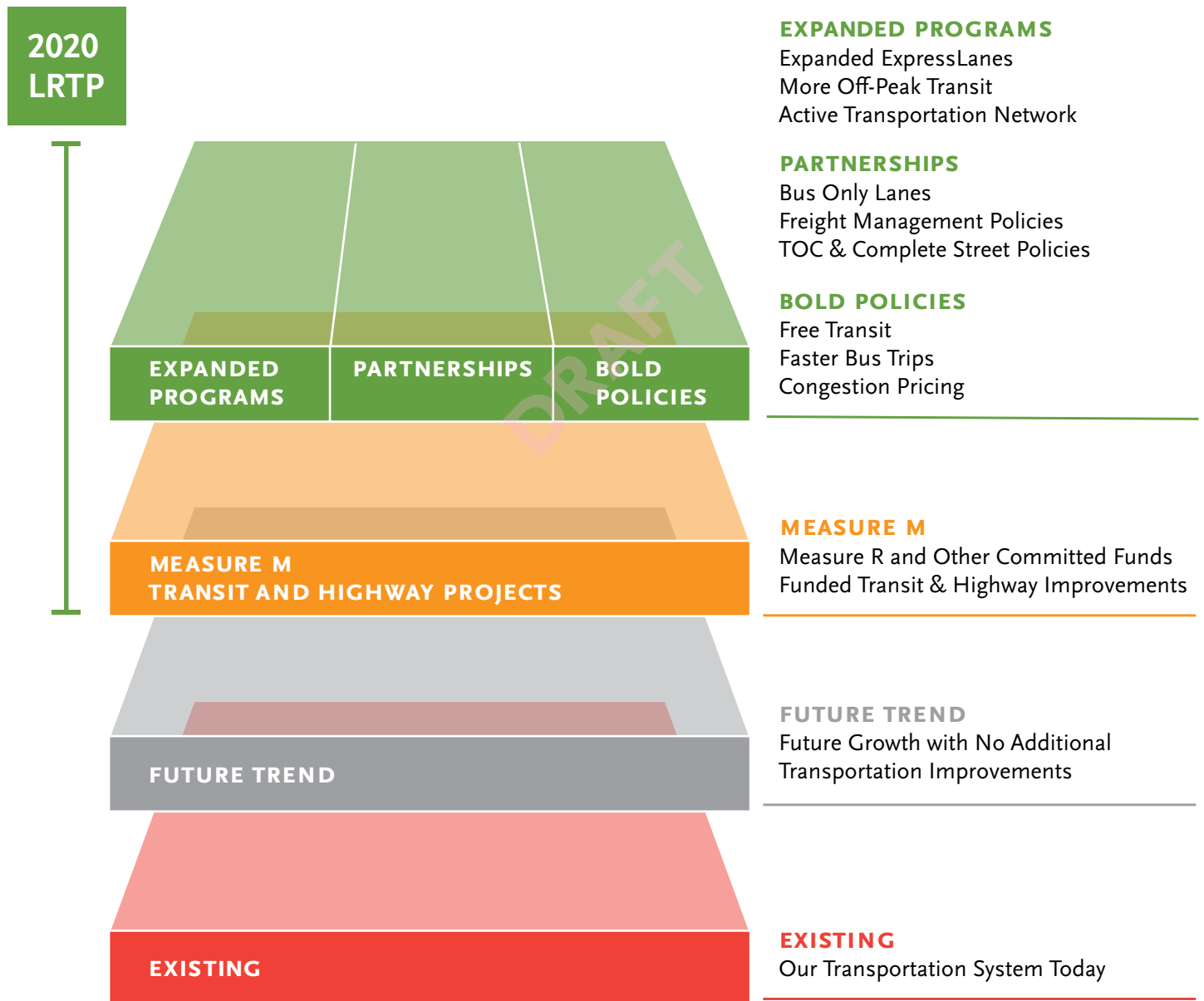




Figure 4  
**Elements of the 2020 LRTP**



# Benefits at a Glance

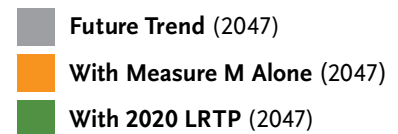
The 2020 Long Range Transportation Plan has the potential to deliver significant mobility benefits to the region through the major capital projects, programs and bold policies.

> The Measure M investment plan, on its own, will **dramatically expand regional access to high-quality travel options**. After implementation, 21% of county residents and 36% of jobs will be a 10-minute walk from high-quality rail or bus rapid transit options, up from only 8% of residents and 16% of jobs at present day.

> Metro's other actions, including current, expanded and new **bold initiatives**, can complement the current capital investment plan and help the region achieve the dramatic changes that we need, such as a potential **81% increase in daily transit trips**, a **31% decrease in traffic delay** and a **19% decrease in greenhouse gas emissions**.

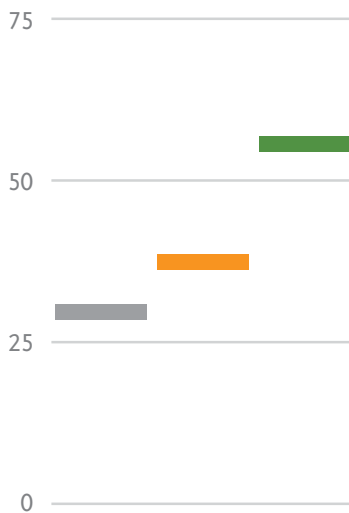
Figure 5

## Benefits of the 2020 LRTP



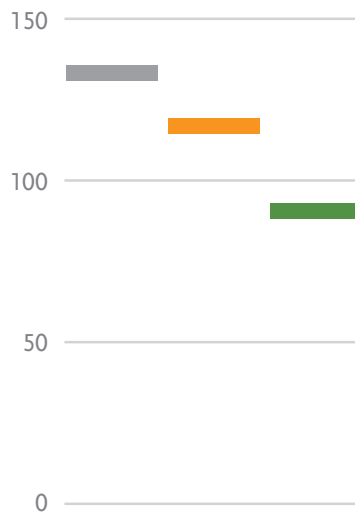
**Transit Trips**  
annual trips per capita

↑  
**81%**



**Vehicle Hours of Delay**  
annual hours per capita

↓  
**31%**



**Greenhouse Gas Emissions**  
annual million metric tons

↓  
**19%**

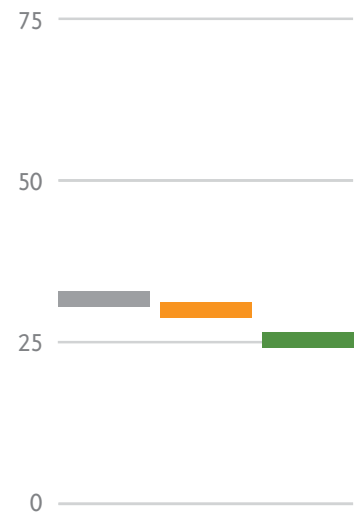
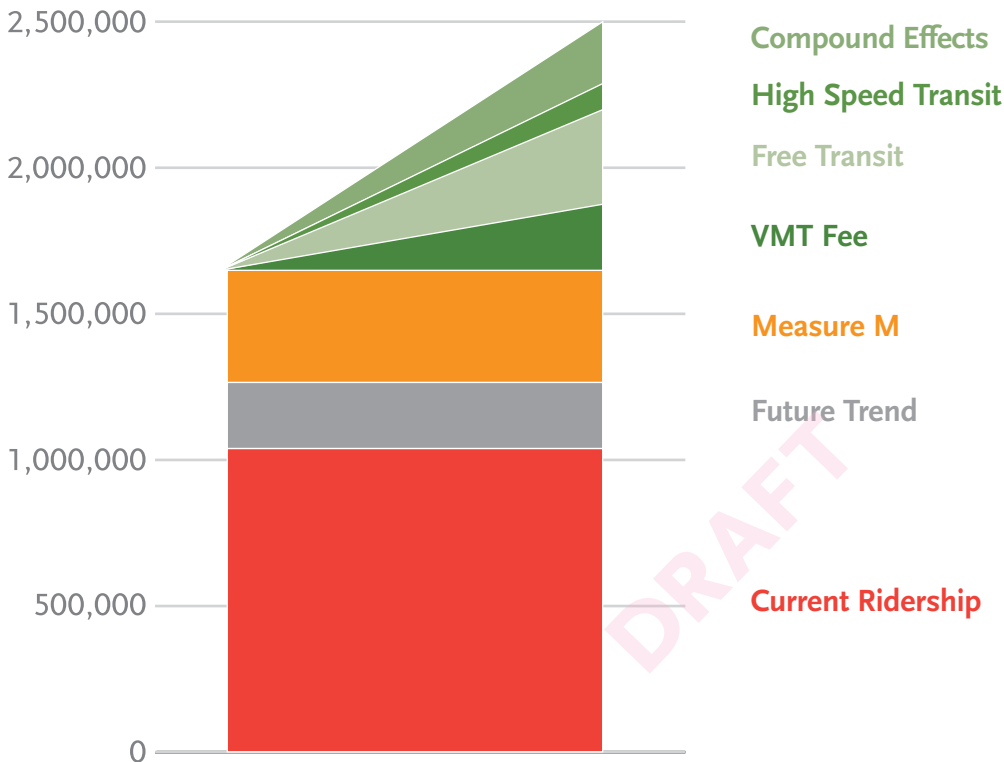


Figure 6

**Potential Increase in Daily Transit Trips**



Beyond the Measure M transit expansion, Metro can gain transit ridership with:

- 1. **Faster Transit (Increased fast/frequent transit):** **+7%**
- 2. **Reduced Transit Fares (Reduced fare/free transit):** **+25%**
- 3. **Road Charges (Mileage-based/VMT fees):** **+18%**

*These scenario tests represent policy opportunities, but do not reflect specific policy directives. Board action will be required for any policy action or implementation.*

Scenario modeling tested the impacts of these strategies above and beyond the transit expansion commitments in this plan.

- > Increases in frequency and increased speeds on 40 most popular bus routes could result in a 7% increase in ridership.
- > Reducing transit fares can increase ridership; a fully subsidized transit trip for all riders may increase ridership up to 25%.
- > For mileage-based fees, each one cent per mile increase can result in roughly a 1% increase in transit ridership. A 20 cent vehicle miles traveled (VMT) fee may result in a 18% increase in transit ridership.
- > Applied together, these strategies have compounding benefits and generate an even larger increase in ridership.

# Metro's Plan guides our priorities.

As outlined in the *Vision 2028 Strategic Plan*, Metro's visionary outcome is to double the share of transportation modes other than solo driving. The Plan details five goals:

- 1 Provide high-quality mobility options that enable people to spend less time traveling
- 2 Deliver outstanding trip experiences for all users of the transportation system
- 3 Enhance communities and lives through mobility and access to opportunity
- 4 Transform LA County through regional collaboration and national leadership
- 5 Provide responsive, accountable, and trustworthy governance within the Metro organization

The 2020 L RTP lays out a future roadmap for bringing about a more mobile, resilient and vibrant future for LA County. Through extensive public outreach, Metro has distilled the region's desires into four priority areas:

- Better Transit
- Less Congestion
- Complete Streets
- Access to Opportunity

The recommended steps in this plan, the L RTP's strategies and actions, are organized by these four priority areas.

Embedded in the priority areas are **equity** to ensure every resident has the affordable transportation choices that work for their needs, and **sustainability** to ensure a bright future for generations to come. Together, we can create Our Next LA\*.



Conceptual Illustration of Plan Elements

Figure 7

**Metro’s Framework for Improving Mobility in LA County**

**We’re guided by our *Strategic Plan* goals.**

 *Vision 2028 Strategic Plan*

**We’re creating**

- ① Faster Travel Options    ② Better Trips    ③ Thriving Communities**

**Better Transit**

Providing more transit options with improved quality and service

- Transit Projects*
- Bus Improvements*
- New Mobility Options*

**Less Congestion**

Managing the transportation system to reduce the amount of time people spend in traffic

- Roadway Improvements*
- Congestion Management*
- Goods Movement*

**Complete Streets**

Making streets and sidewalks safe and convenient for everyone, to support healthy neighborhoods

- Bike and Pedestrian Projects*
- Local Street Improvements*
- Station and Stop Access Enhancements*

**Access to Opportunity**

Investing in communities to expand access to jobs, housing and mobility options

- Workforce Initiatives*
- Support for Local Businesses*
- Transit Oriented Communities*

 *Long Range Transportation Plan*

**We’re committed to**

- ④ Leadership    ⑤ Accountability**

-  Collaboration
-  Continuous Improvement
-  Customer Focus
-  Innovation
-  Inspired and Inclusive Workforce
-  Safety

 *Customer Experience Plan*     *COVID-19 Recovery Plan*

**We’re intentionally focused on *eliminating racial and socioeconomic disparities* and *advancing sustainable practices* in everything we do.**

-  Equity
-  Sustainability

 *Equity Plan*     *Moving Beyond Sustainability Plan*

**OUR  
NEXT  
LA\* is**  
*better transit.*

---



*Better transit* means faster, more frequent, secure and reliable public transportation, with more options and better customer experience. We must create a world-class transit system that is competitive with driving a private vehicle and that works for riders with different trip purposes and destinations. Better transit also means an integrated and seamless trip experience on rail, bus and new mobility transportation options.



**We're investing  
in more transit,  
to serve  
more people.**

Over the **30-year period**, Metro will invest more than **\$80 billion** to improve, expand and upgrade LA County's extensive public transit system.

**This includes the construction or improvement of 22 transit corridors and the addition of 106 miles of fixed guideway transit.**

**In total, the 2020 LRTP will expand the Metro Rail network to over 200 stations covering nearly 240 miles.**

### **Our Commitment to Safety**

Providing a safe, secure, clean, and comfortable experience on transit is perhaps the most critical priority for the operations of Metro's transit system. Recent events have put more of an emphasis on these issues, and Metro must maintain a balanced and coordinated effort to ensure that individuals are secure and feel safe riding transit, while at the same time making sure that we meet our commitments as a public agency that provides an essential public service.

The COVID-19 pandemic has highlighted the need to provide clean spaces as well as free masks to keep passengers and drivers safe. At the same time, the number of individuals experiencing homelessness in LA County continues to increase and Metro must continue to provide compassionate responses and a public service for those with few resources.

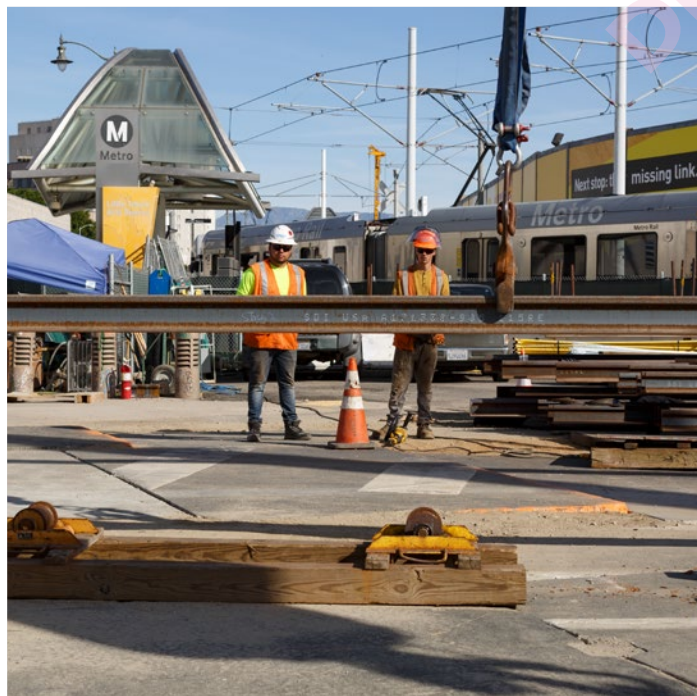
Finally, the nationwide call for police reform has reinforced our need to examine our policing practices to ensure no individuals or population groups are disproportionately targeted, while at the same time ensuring the safety of our passengers and drivers.



## Metro Rail Expansion

Construction is underway on several rail corridors. The Crenshaw/LAX Transit Project light rail line, expected to open in 2021, will extend from the E Line (Expo) to the C Line (Green), with a station at the Los Angeles International Airport's Automated People Mover. The Regional Connector Transit Project, scheduled to open in 2022, will connect the L Line (Gold) to the A Line (Blue) and E Line (Expo) to provide more stations in downtown Los Angeles and greater connectivity. The Westside D Line (Purple) subway extension along Wilshire Boulevard is under construction in three phases, with Section 1 from Western to La Cienega scheduled to open in 2023.

Other near-term projects include the Metro Gold Line Foothill Extension to Claremont, which recently broke ground, the East San Fernando Valley Light Rail Project, the West Santa Ana Branch Transit Corridor, and the C Line (Green) Extension to Torrance.



## Bus Rapid Transit

Bus Rapid Transit (BRT) is a high-quality bus-based transit system that delivers fast, frequent service. It does this with bus-only lanes, traffic-signal priority and high-quality stations with all-door boarding. The G Line (Orange) was extended from Canoga Park to Chatsworth in 2012 and is currently undergoing further enhancements to improve operating speeds, capacity and safety by adding grade separations on major streets, closing minor streets and providing better signal priority technology.

Other near-term projects include the North Hollywood to Pasadena BRT and North San Fernando Valley Transit Corridor (Chatsworth to North Hollywood). Additionally, Measure M included funding for to-be-determined BRT corridors. The BRT Vision and Principles Study, currently underway, will identify performance standards and design criteria for future BRT projects.



# Transit Investment

Figure 8

## Major Transit Projects

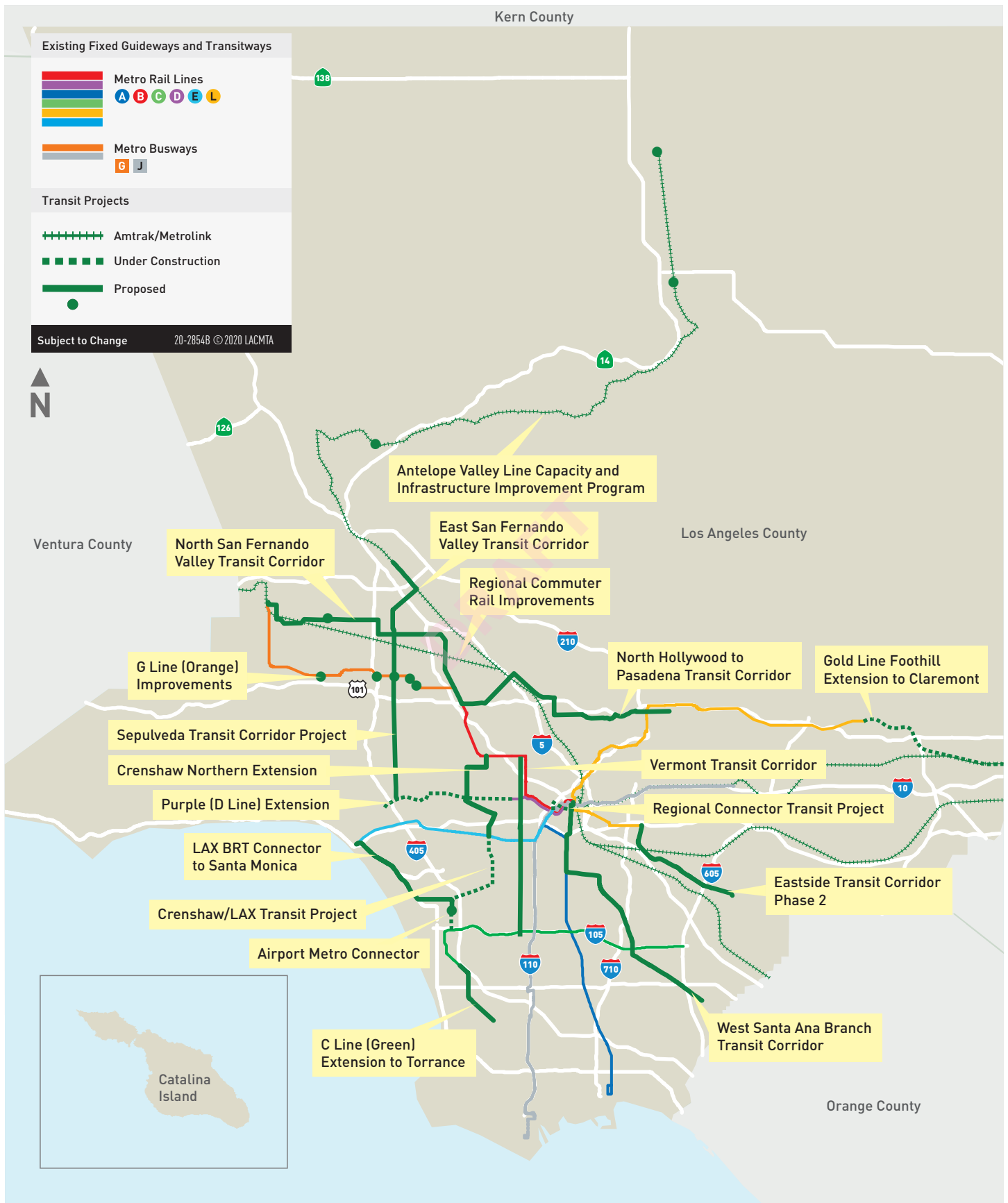
	\$ IN MILLIONS	ESTIMATED OPEN YEAR
Crenshaw/LAX Transit Project (LRT)	2,058	2021
Regional Connector Transit Project (LRT)	1,756	2022
D Line (Purple) Extension (HRT)		
Section 1 (Wilshire/Western to Wilshire/La Cienega)	2,779	2023
Section 2 (Wilshire/La Cienega to Century City/Constellation)	2,441	2026
Section 3 (Century City/Constellation to Westwood/VA Hospital)	3,224	2027
Airport Metro Connector/96th Street Station/Green Line Ext LAX	626	2024
North Hollywood to Pasadena Transit Corridor (BRT)	315	2024
North San Fernando Valley Transit Corridor (BRT)	207	2025
G Line (Orange) Improvements	314	2025
East San Fernando Valley Light Rail Project (LRT)	1,568	2027
Gold Line Foothill Extension to Claremont (LRT)	1,571	2028
Vermont Transit Corridor	524	2028
Antelope Valley Line Capacity and Infrastructure Improvement Program	221	2028
West Santa Ana Branch Transit Corridor (LRT)		
Phase 1	1,250	2028
Phase 2	5,061	2041
C Line (Green) Extension to Torrance (LRT)	1,167	2030
Sepulveda Transit Corridor (Mode TBD)		
Phase 2 – Valley to Westside	7,685	2033
Phase 3 – Westside to LAX	10,587	2057*
Eastside Extension Phase 2 Transit Corridor (1st Alignment)	4,409	2035
Crenshaw Northern Extension (LRT)	4,744	2047
Lincoln Bl (BRT)	220	2047
SF Valley Transportation Improvements	257	2050
C Line (Green) Eastern Extension to Norwalk (LRT)	1,891	2052*
G Line (Orange) Conversion to Light Rail	4,069	2057*
Historic Downtown Streetcar	581	2057*
Eastside Extension Phase 2 Transit Corridor (2nd Alignment)	8,707	2057*
<b>Total</b>	<b>68,232</b>	

L RTP project costs may not match Measure M expenditure plan due to year of expenditure escalation and prior spending. Final mode, alignments, and station locations to be confirmed during environmental processes. Estimated open year is a three-year range.

\*Includes projects through 2057, (currently planned as the horizon year of measure M beyond the L RTP)

Figure 9

# PLANNED TRANSIT PROJECTS



Final alignments to be identified during environmental processes. Map includes projects to be completed prior to 2050 (horizon year of the LRTP).

## Priority Area 1: Better Transit

### Strategy 1.1: Expand rail transportation countywide

Since the A Line (Blue) opened in 1990, Metro has undergone a tremendous expansion of our rail transportation system, growing to the second largest rail system in the U.S. Aided by Measure R and Measure M, Metro is continuing to build out the rail network at a rapid pace. There are four rail corridors in construction currently and many more in design and planning.

ACTION	NOW	SOON	FUTURE	BUILD	MANAGE	MAINTAIN	PARTNER
1.1a. Complete Metro Rail projects in construction	●			●			
1.1b. Implement Metro Rail projects in design		●		●			
1.1c. Prioritize four “pillar” Rail projects (West Santa Ana Branch, Eastside Extension Ph. 2, C Line [Green] to Torrance, and Sepulveda Transit Corridor)		●					●
1.1d. Identify and plan future Metro rail expansion			●	●			●
1.1e. Complete Link Union Station (Link US) project		●		●			●
1.1f. Support Metrolink Southern California Optimized Rail Expansion (SCORE) Program	●						●

### Strategy 1.2: Improve the frequency, speed and reliability of the bus and rail transit networks

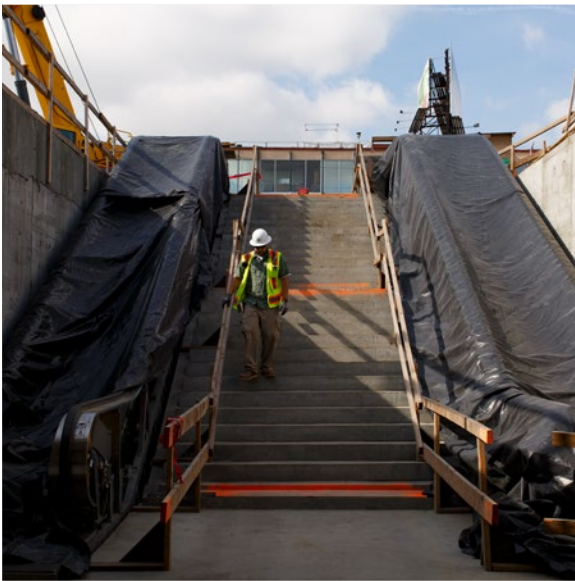
Through signature efforts, including the NextGen Bus Plan and BRT Vision and Principles Study, Metro is redesigning our bus network to be faster, more frequent and reliable, as well as integrated with other LA County transit services. The first significant system update in 25 years, Metro’s NextGen Bus Plan aims to reverse the recent declining ridership trend.

ACTION	NOW	SOON	FUTURE	BUILD	MANAGE	MAINTAIN	PARTNER
1.2a. Implement recommendations of the NextGen Bus Plan	●			●	●	●	●
1.2b. Improve average travel speeds for the bus network	●	●			●		●
1.2c. Implement systemwide bus all-door boarding	●	●			●		
1.2d. Implement systemwide transit signal priority for bus and rail transit	●	●			●		●
1.2e. Support complementary paratransit service	●				●		●
1.2f. Continue coordination between Metro and municipal bus operators	●						●
1.2g. Implement new Intelligent Transportation System to better match travel/transit demand and transit service		●			●		
1.2h. Implement Metro BRT projects in design		●		●			●
1.2i. Implement future BRT corridors identified in BRT Vision and Principles study			●	●			●
1.2j. Complete G Line (Orange) Improvements	●	●		●		●	●



## Crenshaw/LAX Transit Project

The Crenshaw/LAX Transit Project, currently in construction, will extend from the existing E Line (Expo) at Crenshaw 8.5 miles southwest to the C Line (Green). Opening in 2021, the Crenshaw Line will add eight new stations, including one at the Automated People Mover currently under construction at the Los Angeles International Airport (LAX). Along the line, Destination Crenshaw, a 1.3-mile open-air museum will celebrate the African American culture and community of the corridor. The project will create pocket parks with culturally stamped sidewalks, lighting and landscaping improvements, business facades and public structures.



## NextGen Bus Plan

In 2018, Metro began the process of reimagining our bus system to better meet the needs of current and future riders. The proposed plan, recently released for public comment, proposes improvements, which would: double the number of frequent Metro bus lines; provide more than 80% of current bus riders with 15-minute or better frequency; create an all-day, every day service; ensure a one quarter-mile walk to a bus stop for 99% of current riders; and create a more comfortable and safer waiting environment. The “Transit First” approach would include capital projects that speed up buses (bus lanes and traffic signal priority, etc.), make bus stops more comfortable, expand all-door boarding and add even more frequent services, among other improvements.



## Bus-Only Lanes

In order to make transit truly competitive with driving, Metro is working with local agencies to convert key sections of curb lanes to bus-only lanes. Two recent examples of bus-only lanes include the Wilshire Boulevard and Flower Street bus lanes. Metro’s 720 Rapid bus operates on dedicated curbside bus lanes along Wilshire Boulevard from the western edge of downtown Los Angeles to the eastern edge of the City of Santa Monica (excluding Beverly Hills). The Flower Street bus lane is a pilot, weekday evening rush hour (3–7pm) bus-only lane along Flower Street between 7th Street and Adams Boulevard.

### Strategy 1.3: Enable easier fare payment

A convenient, integrated fare payment that is accessible to all residents is essential for a world-class transportation system. Metro is expanding payment options in partnership with regional operators for a seamless payment experience. While TAP is already integrated across many services, customers will soon be able to pay for their fare through a mobile app.

ACTION	NOW	SOON	FUTURE	BUILD	MANAGE	MAINTAIN	PARTNER
1.3a. Integrate payment for third-party mobility services		●					●
1.3b. Expand TAP integration with all regional partners	●						●
1.3c. Develop TAP mobile app		●					●

### Strategy 1.4: Enhance station areas

To deliver excellent transit experiences, Metro is committed to improving stations and surrounding areas to be safe, smart, clean and green.

ACTION	NOW	SOON	FUTURE	BUILD	MANAGE	MAINTAIN	PARTNER
1.4a. Consistently Implement Systemwide Station Design for attractive, well-integrated, sustainable, and maintainable station environments	●			●			
1.4b. Improve customer information, including the availability of real-time arrival information, wayfinding, and consistent signage	●				●		
1.4c. Increase shading and cooling at transit stations	●			●		●	●
1.4d. Improve bus shelter amenities in partnership with local jurisdictions	●			●		●	●
1.4e. Implement Metro's Supportive Transit Parking Program Master Plan	●			●			
1.4f. Optimize station safety and security, including lighting levels, spacious uncluttered station environments, and effective monitoring of station area	●				●		

### Strategy 1.5: Explore new service delivery

With new and competing transportation options, Metro must embrace new forms of mobility to attract and retain riders. In partnership with Via, Metro has implemented a Mobility on Demand pilot program with free, accessible and on-demand rides. The agency will also operate its own on-demand service with Metro employees behind the wheel called Metro Micro, which will serve six service areas in 2021 with the goal of capturing short trips around high transit ridership zones and complementing the existing fixed route system.

ACTION	NOW	SOON	FUTURE	BUILD	MANAGE	MAINTAIN	PARTNER
1.5a. Implement Mobility on Demand (MOD) partnership with Via	●						●
1.5b. Implement Metro Micro on-demand transit service	●				●		●
1.5c. Launch Mobility as a Service (MaaS) platform		●					●

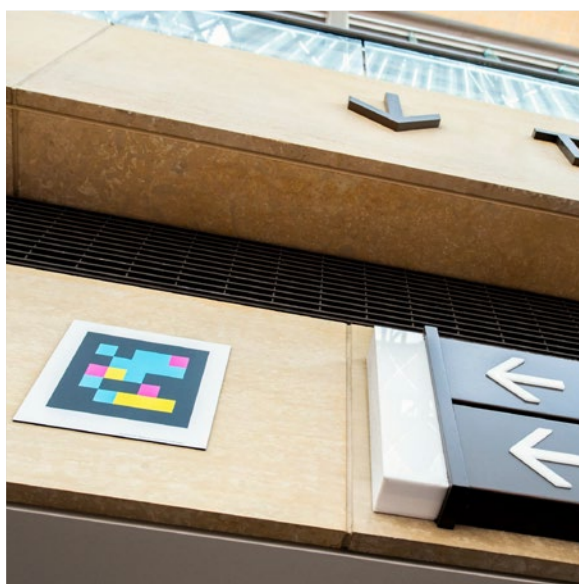
### Strategy 1.6: Enhance customer experience

The new Customer Experience program goal is to minimize pain points, maximize smooth, uneventful experiences, and find opportunity for occasional surprise and delight. We are creating a system that is modern and intuitive, using design, technology and policies to address the unique needs of our customers at every stage of their journey.

ACTION	NOW	SOON	FUTURE	BUILD	MANAGE	MAINTAIN	PARTNER
1.6a. Implement practices from Transfer Design Guide	●			●	●		●
1.6b. Support passengers with disabilities, including ensuring universal accessibility of stations	●				●		●
1.6c. Develop Gender Action Plan to address unique needs of women	●				●		
1.6d. Ensure transit experience is clean and comfortable	●					●	
1.6e. Implement Facilities Assessments to maintain a state of good repair	●					●	

#### Accessible Wayfinding

Metro is testing wayfinding strategies for the visually impaired so they can more easily navigate the transit system. This technology, NaviLens, allows users to access arrival and departure information and descriptions of how to get to different platforms at Union Station from a mobile application. The pilot deployment of NaviLens technology has allowed visually impaired riders to feel more comfortable traveling alone and improved the experience for passengers with disabilities.



#### How Women Travel

Metro was the first transit agency in the nation to study and report on women’s unique mobility needs. This 2019 report found that women take more Metro trips, ride public transit more often and prioritize safety more often than men. Metro is taking action on these findings by developing a Gender Action Plan to improve the rider experience for women, including rethinking communications, fare policies, station design and service hours.



## Strategy 1.7: Enhance transportation system security and build public trust

Customer safety is a top priority for Metro. We must continue to address safety concerns, while at the same time, build trust between our riders, communities and partners, public safety professionals and Metro employees.

ACTION	NOW	SOON	FUTURE	BUILD	MANAGE	MAINTAIN	PARTNER
1.7a. Introduce the Transit Homeless Action Plan 2.0	●				●		●
1.7b. Align the Multi-Agency Policing Plan to include Metro's system expansion plans	●				●		●
1.7c. Launch Metro's new and improved Sexual Harassment Plan	●				●		●
1.7d. Develop new overall security-enhancing measures for the entire system to include environmental station design	●				●		
1.7e. Update the Security & Emergency Preparedness Plan and Metro Training		●			●		
1.7f. Open and operate the Emergency Security Operations Center			●	●	●		
1.7g. Enhance Emergency Management, Continuity of Operations, and Emergency Operations Procedures to national certification levels	●						●

### Transit Homeless Action Plan

In February 2017, Metro released its first Transit Homeless Action Plan that focused on improving the passenger experience through coordinated and comprehensive outreach to homeless individuals throughout Metro's transit system. The Homeless Action Plan is focused on four implementation areas including research, education, coordination, and outreach. Research is intended to help Metro understand homelessness in the transit system while education is focused on increasing understanding among Metro staff and passengers about how to respond when encountering individuals believed to be homeless. Metro is one of several stakeholders involved in the delivery of services to homeless populations in LA County; a key component of Metro's Homeless Outreach Plan is the City, County, Community (C3) outreach teams that Metro deploys to make contact with individuals believed to be homeless and link them to services and permanent housing solutions.





## Strategy 1.8: Optimize sustainable and resilient operations and maintenance of fleet, infrastructure and facilities

Better transit includes sustainable and efficient transit systems. Metro employs life cycle and efficiency considerations for buses, maintenance yards and resource acquisition.

ACTION	NOW	SOON	FUTURE	BUILD	MANAGE	MAINTAIN	PARTNER
1.8a. Implement Transit Asset Management Plan	●					●	
1.8b. Develop and implement an agency-wide Sustainable Acquisition Program	●				●		
1.8c. Integrate resource conservation, life cycle and efficiency considerations into Metro's operational and construction policies, Standard Operating Procedures (SOPs) and specifications	●					●	●
1.8d. Develop and implement materials, construction and operations-related training for Metro staff, partners and community to facilitate a culture of sustainability and resiliency	●					●	●
1.8e. Transition to zero emission buses systemwide	●	●			●		
1.8f. Modify the B Line (Red)/D Line (Purple) maintenance yard	●			●			



# More transit trips mean more opportunity.

Transit improvements in the 2020 LRTP, including the expansion of Metro Rail and Bus Rapid Transit, will help add more than 1,000,000 daily transit trips, an increase of 81%. For commute trips, this has the potential to increase transit mode share for daily trips to and from work from 8.8% to 14.7%.

■ **Future Trend (2047)**  
■ **With 2020 LRTP (2047)**

Figure 10  
**Daily Transit Trips**

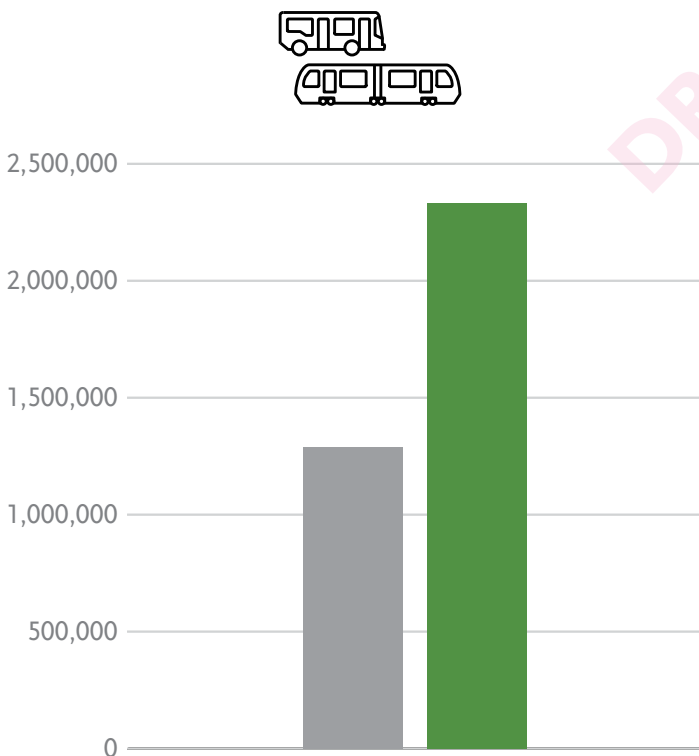
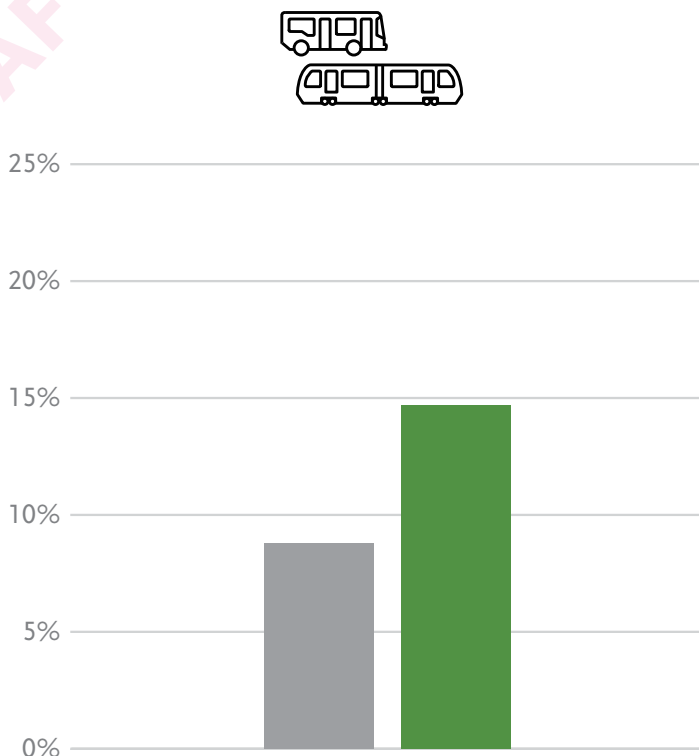


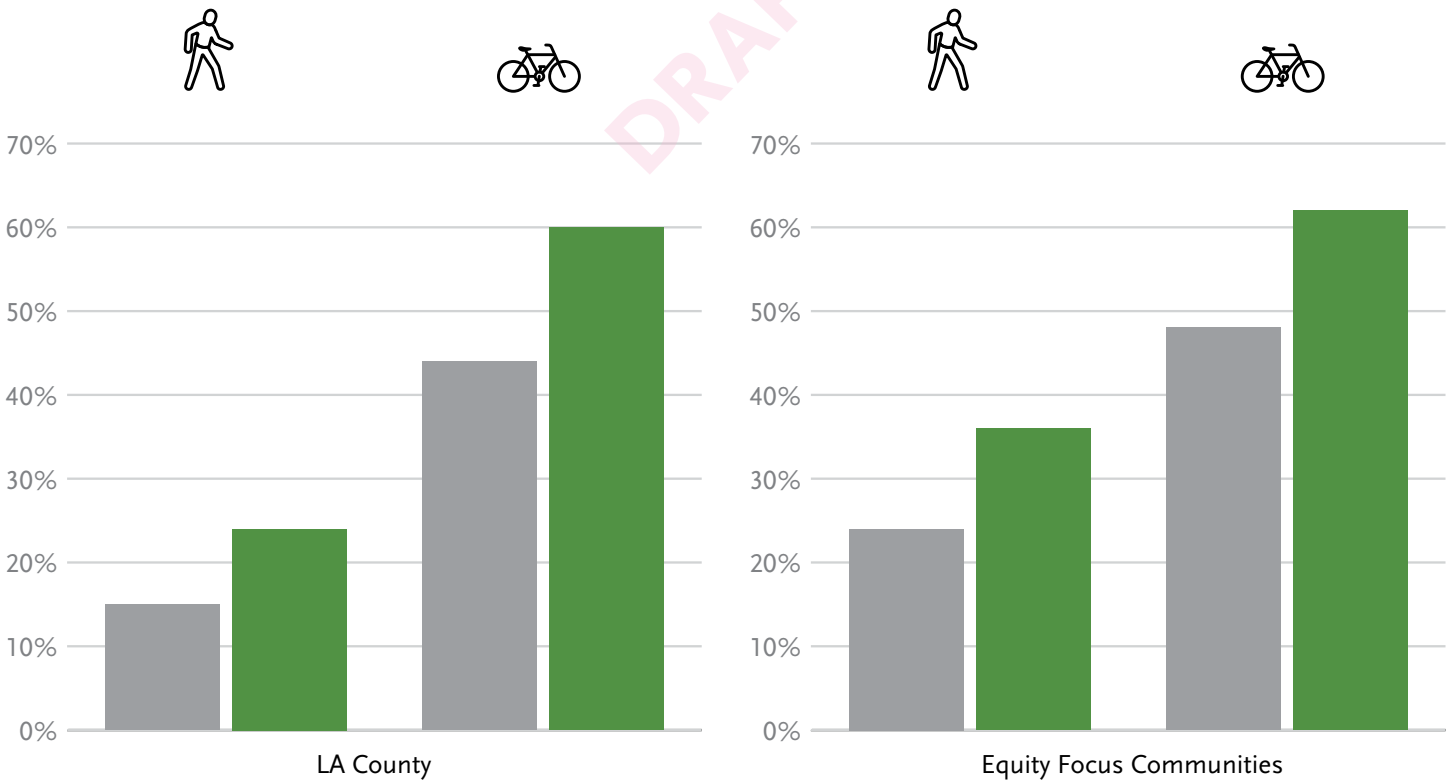
Figure 11  
**Transit Mode Share for Commute Trips**



Better transit means access to fast, frequent and reliable public transportation. Through the expansion of rail and bus rapid transit, the 2020 LRTP will increase the percentage of households within a 10-minute walk and roll of fixed guideway transit. Countywide, the percentage of households will increase by 133% (walk) and 38% (roll). In Equity Focus Communities (see page 66), the percentage of households increase by 86% and 18% for walk and roll, respectively.

Figure 12

**Percent of Households within a 10-minute Walk or Roll of Fixed Guideway Transit**



**OUR  
NEXT  
LA\* is**  
*less congestion.*

---







*Less congestion* means options to bypass traffic, and improved travel times for you. We do this by using technology and policies to manage traffic flow, respond to incidents and increase the efficiency of the roadway transportation system.



# We're investing in our roadways and the communities that use them.

Metro, in partnership with the California Department of Transportation (Caltrans), who owns and maintains the freeway system, advances the planning, environmental clearance, design and construction of major capital projects such as carpool lanes, freeway widening, interchange improvements, auxiliary lanes, freeway ramp improvements and other freeway capacity and operational improvement projects. Metro also works with local agencies to implement smaller scale improvements such as arterial widenings, intersection upgrades, ramp metering, traffic signal synchronization, integrated corridor management and intelligent transportation systems (ITS) solutions.

The 2020 LRTP includes more than **\$105 billion** in roadway investments, including operations and maintenance, active transportation and multi-modal projects, support for local cities and subregions, as well as almost **\$27 billion** for major highway investments.

## Metro ExpressLanes

ExpressLanes are dynamically priced toll lanes where single occupant vehicles (SOVs) are given the option to pay a variable fee to use the lanes and avoid delay, while carpoolers, vanpoolers and buses are permitted to use the lanes at no charge. In 2012, the carpool lanes on I-110 and I-10 were converted to ExpressLanes, where prices change based on real-time traffic demand on the facility to ensure vehicles travel at least 45 miles per hour in the toll lanes. This helps optimize the traffic flow in the ExpressLanes and provides a more reliable option when traffic in the other lanes slows down. The I-110 and I-10 ExpressLanes have saved commuters, on average, six minutes during peak morning commutes and has led to increased bus ridership on express bus routes that use the lanes. The ExpressLanes Strategic Network is illustrated in Figure 13.



# Highway Investment

Figure 14

## Major Highway Projects

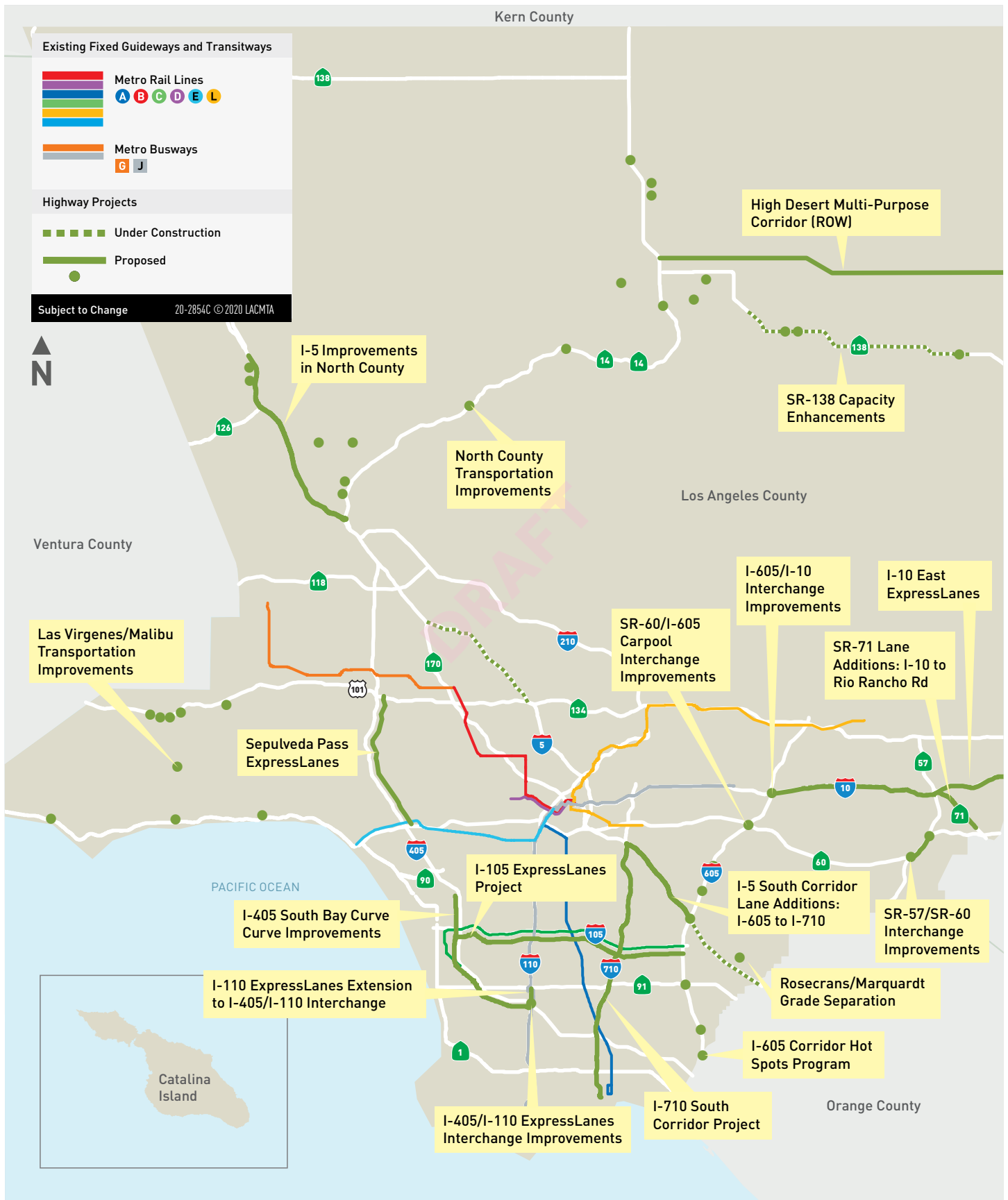
	\$ IN MILLIONS	ESTIMATED OPEN YEAR
I-5 Capacity Enhancement (I-605 to Orange County Line)	1,410	2023
I-5 North Carpool Lanes – SR-134 to SR-170	637	2023
Rosecrans/Marquardt Grade Separation	155	2024
Alameda Corridor East Grade Separations Phase II	1,685	2024
SR-71 Gap from I-10 to Rio Rancho Rd	379	2026
I-5 North Capacity Enhancements (SR-14 to Parker Rd)	679	2026
Highway Operational Improvements in Las Virgenes/Malibu subregion	175	2026
Sepulveda Pass Transit Corridor (Phase 1 – ExpressLanes)	311	2027
I-105 ExpressLanes from I-405 to I-605	530	2027
SR-57/SR-60 Interchange Improvements	422	2027
I-10 ExpressLanes from I-605 to LA/ San Bernardino Line	197	2028
SR-138 Capacity Enhancements	200	2028
I-605 Corridor "Hot Spot" Interchange Improvements	2,639	2030
Highway Operational Improvements in Arroyo Verdugo subregion	170	2030
High Desert Multi-Purpose Corridor	393	2034
I-405, I-110, I-105 and SR-91 Ramp and Interchange Improvements (South Bay)	1,413	2039
Countywide Soundwall Construction	590	2040
I-710 South Corridor Project (Phase 1)	5,697	2040
I-710 South Corridor Project (Phase 2)	1,512	2041
I-5 Corridor Improvements (I-605 to I-710)	2,036	2042
I-405/I-110 Int. HOV Connect Ramps & Interchange Improvements	504	2044
I-110 ExpressLanes Ext South to I-405/I-110 Interchange	599	2046
I-605/I-10 Interchange	1,287	2047
SR 60/I-605 Interchange HOV Direct Connectors	1,055	2047
I-405 South Bay Curve Improvements	883	2047
SR-710 North Corridor Mobility Improvement Projects	1,086	Varies
<b>Total</b>	<b>26,644</b>	

L RTP project costs may not match Measure M expenditure plan due to year of expenditure escalation and prior spending. Final alignments and limits to be determined during environmental processes.



Figure 15

# PLANNED HIGHWAY PROJECTS



Final alignments to be included during environmental processes.

## Priority Area 2: Less Congestion

### Strategy 2.1: Implement operational improvements with technology

By implementing technology improvements, Metro aims to manage congestion, improve safety and provide more reliable travel times for passenger and freight vehicles. Metro embraces technology to advance operational improvements, including through the Regional Integration of Intelligent Transportation Systems (RIITS) and the Countywide Signal Priority Program.

ACTION	NOW	SOON	FUTURE	BUILD	MANAGE	MAINTAIN	PARTNER
2.1a. Implement integrated corridor management (ICM) projects, including the I-210 Connected Corridors project		●			●		●
2.1b. Integrate freeway Intelligent Transportation Systems (ITS) strategies	●				●		●
2.1c. Implement arterial ITS programs, including Countywide Signal Priority Program and traffic signal synchronization	●				●		●
2.1d. Prepare for connected and autonomous vehicles (CAV) and implement other smart highway strategies			●		●		●

### Strategy 2.2: Improve traveler information

Real time, accurate travel information is an importance resource for managing roadway congestion. Metro plays a vital role as a regional agency to collect and share information with local partners and residents.

ACTION	NOW	SOON	FUTURE	BUILD	MANAGE	MAINTAIN	PARTNER
2.2a. Continue and improve 511 system	●				●		●
2.2b. Share transportation information with regional partners	●						●

### Strategy 2.3: Expand the managed lane network

Metro understands that we cannot add new lanes to most freeways, so to improve traffic flow, we must manage our system better. Managed lanes, such as high-occupant vehicle (HOV) lanes and high-occupancy toll (HOT) lanes, help optimize the traffic flow in one or two lanes, thereby increasing the capacity of the whole corridor. HOT lanes, called ExpressLanes in LA County, allow carpoolers to travel for free, while allowing solo drivers to pay a dynamically priced toll.

ACTION	NOW	SOON	FUTURE	BUILD	MANAGE	MAINTAIN	PARTNER
2.3a. Extend the high-occupancy vehicle network	●			●			●
2.3b. Complete the Tier 1 ExpressLanes network	●	●		●	●		●
2.3c. Complete HOV and ExpressLanes direct connectors (I-105/I-605; I-110/I-405; I-605/SR-60)		●		●			●
2.3d. Complete the Tier 2 ExpressLanes network			●	●	●		●
2.3e. Complete the Tier 3 ExpressLanes network			●	●	●		●
2.3f. Evaluate financial policies to expand the ExpressLanes system using revenues generated from the existing network	●				●		●

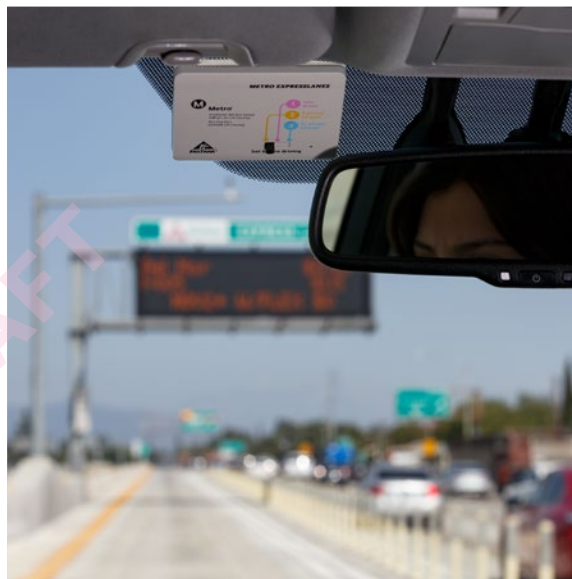
## Integrated Corridor Management

Caltrans, Metro, and local agencies are piloting the I-210 Connected Corridor project that includes Integrated Corridor Management (ICM) strategies along I-210 in the San Gabriel Valley. ICM is an Intelligent Transportation Systems (ITS) strategy to manage non-recurring congestion along a corridor by utilizing advanced technologies and systems. ICM components include active monitoring of all transportation modes and facilities within the corridor, on and off the freeway, including ramp metering, traffic signal coordination, incident traffic management, advanced traveler information system, and other advanced technologies and techniques.



## ExpressLanes Expansion

By using dynamic pricing based on the current usage level, traffic flow in the ExpressLanes is continuously managed to maintain speed and flow, providing a more reliable option. The 2017 Countywide ExpressLanes Strategic Plan established a vision for a network of ExpressLanes to increase mobility throughout LA County. Targeted corridors have been identified by tiers, with near-term potential (Tier 1) within five to 10 years, mid-term potential (Tier 2) within 15 years, and longer-term potential (Tier 3) within 25 years. The ExpressLanes network expansion (as illustrated in Figure 13) is predicated upon the assumption that revenues from each operating segment will be leveraged to develop other portions of the network.



## Regional Integration of ITS (RIITS)

RIITS is a program that enables the efficient compilation, management and exchange of transportation information. RIITS integrates and presents transportation information via data feeds to allow government agencies to exchange data with each other, and provides private companies access to the data to share with the public. RIITS consists of a physical network, operational system and administrative processes in support of real-time exchange of information among agencies in Southern California. Information is currently exchanged with Caltrans Districts 7, 8 and 12, Los Angeles Department of Transportation, California Highway Patrol (CHP), Metro, Foothill Transit, LA County Department of Public Works and others.

## Strategy 2.4: Minimize impact of roadway incidents

Metro aims to quickly and safely clear roadway incidents to improve traffic flow and lessen congestion. The Kenneth Hahn Callbox System and Metro Freeway Service Patrol work together to allow for quick response and clearance of stalled vehicles on the freeway.

ACTION	NOW	SOON	FUTURE	BUILD	MANAGE	MAINTAIN	PARTNER
2.4a. Continue and expand Metro Freeway Service Patrol	●				●		
2.4b. Continue the Kenneth Hahn Callbox System	●					●	●

## Strategy 2.5: Support efficient and sustainable goods movement

The LA County Goods Movement Strategic Plan, under development with stakeholders across the county, will develop a comprehensive approach that balances various goals, including the efficient and effective flow of goods to support economic and environmental sustainability and prosperity.

ACTION	NOW	SOON	FUTURE	BUILD	MANAGE	MAINTAIN	PARTNER
2.5a. Implement LA County Goods Movement Strategic Plan			●		●		●
2.5b. Develop curbside mobility improvements in partnership with regional agencies	●				●		●
2.5c. Invest in multi-modal freight improvement options (rail investment and clean truck program)				●			●
2.5d. Improve freight traveler information sharing	●				●		●

## Strategy 2.6: Enhance regional circulation

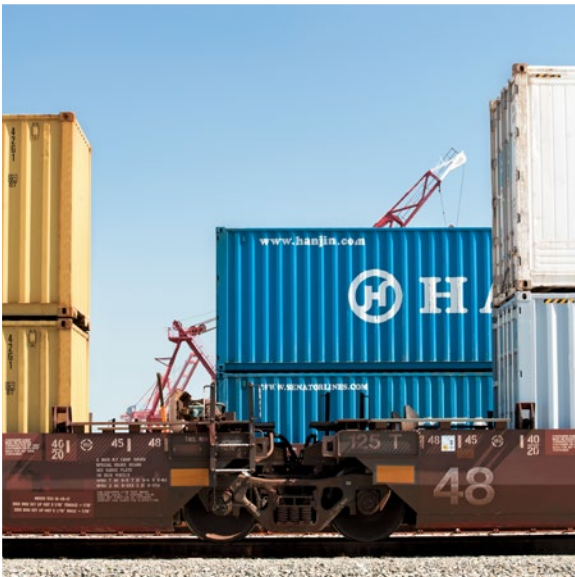
The transportation system is a network that requires systematic approaches to address regional circulation issues. Metro is exploring regulatory and pricing mechanisms, as well as the expansion of current programs to manage demand and enhance circulation.

ACTION	NOW	SOON	FUTURE	BUILD	MANAGE	MAINTAIN	PARTNER
2.6a. Implement New Mobility Regional Roadmap, a framework for building a countywide coalition to collectively determine the best path forward for managing new mobility	●				●		●
2.6b. Complete Traffic Reduction Study that will explore how congestion pricing and additional transportation options could work together to reduce traffic congestion and increase mobility	●				●		●
2.6c. Recommend a pilot traffic reduction program after completion of the Traffic Reduction Study			●	●	●		●
2.6d. Continue to expand Metro Rideshare/Vanpool and Shared Mobility Program	●	●			●		●
2.6e. Support transportation demand management (TDM) programs and commute-trip reduction initiatives, including telecommuting	●				●		●



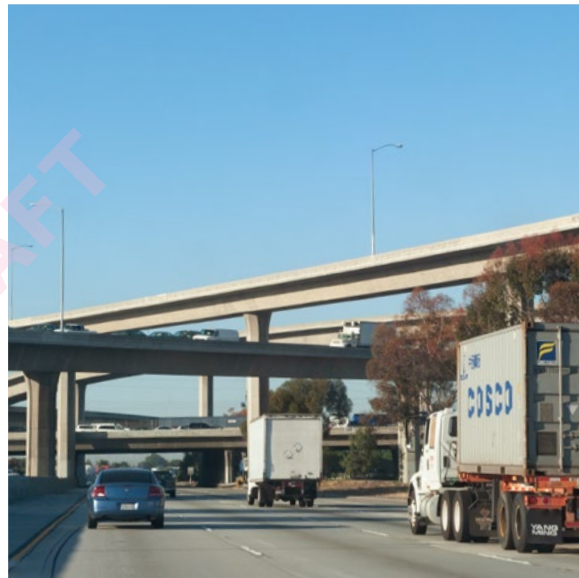
## Goods Movement Strategic Plan

Safe and efficient goods movement through LA County supports a vibrant quality of life for its residents and the long-term economic health and competitiveness of the region. A culture of innovation, adoption of technology such as ITS and DrayFlex, and strategic investment in our multimodal goods movement transportation system will improve the movement of goods through the major seaports, the Ports of Long Beach and Los Angeles, airports, and intermodal facilities to our homes and businesses. Developing sustainability and equity strategies to overcome a history of inequitable impacts such as air pollution, displacement, and lack of investment related to freight while developing stronger skillsets and workforce opportunities for disadvantaged communities will be vital to implement LA County's Goods Movement Strategic Plan and its Sustainable Freight Competitiveness Framework.



## Traffic Reduction Study

Metro is conducting a Traffic Reduction Study (formerly called the Congestion Pricing Feasibility Study), to determine: if a traffic reduction program would be feasible and successful in LA County; where and how a pilot program with congestion pricing and complementary transportation options could achieve the project goals of reducing traffic congestion; and identify willing local partners to collaborate with on a potential pilot program. Metro will engage stakeholders and the public throughout this process. Through engagement with stakeholders, the study will explore how to affect additional positive outcomes that will benefit residents, workers, and businesses in LA County, including improving the economy, supporting environmental and economic justice, and improving health and safety.



## Strategy 2.7: Enhance the operation of the state highway system

Metro continues to address key bottlenecks in LA County, some of the most congested in the US. Metro works with Caltrans and regional partners to plan, build and maintain projects that address highway capacity and operational efficiency.

ACTION	NOW	SOON	FUTURE	BUILD	MANAGE	MAINTAIN	PARTNER
2.7a. Work with Caltrans and local agencies to construct capacity-improving projects to address freeway bottlenecks	●			●			●
2.7b. Work with Caltrans and local agencies on a system approach to create a roadway network comprising the state highways and local arterials to improve throughput and alleviate traffic congestion	●				●		●

## Strategy 2.8: Improve the resiliency of Metro's transportation system

A resilient Metro system is prepared and able to mitigate future hazards that would otherwise interfere with operations, disrupt service and endanger passengers. Metro addresses system resiliency with risk assessments, decision making that considers hazards, and climate adaptation plans and policies.

ACTION	NOW	SOON	FUTURE	BUILD	MANAGE	MAINTAIN	PARTNER
2.8a. Conduct and maintain a multi-hazard risk assessment to understand vulnerabilities of the transportation system	●					●	
2.8b. Incorporate considerations for all hazards into Metro decision-making about capital planning, procurement, asset management and operations	●					●	
2.8c. Regularly update resilience and climate adaptation plans and policies to address changing hazards and risks to system service	●				●		
2.8d. Implement hazard mitigation and climate adaptation strategies to increase transportation system resilience and passenger safety	●				●		



# Our congestion reduction plan means less delays for drivers.

The congestion reducing strategies included in the 2020 LRTP will lead to a reduction in vehicle miles traveled and vehicle hours of delay per capita. Compared to the future trend, the LRTP will lead to a 31% reduction in delay and a 9% reduction in vehicle miles traveled, a key metric for tracking the usage of personal vehicles.

- Future Trend (2047)**
- With 2020 LRTP (2047)**

Figure 16

**Annual Vehicle Miles Traveled Per Capita**

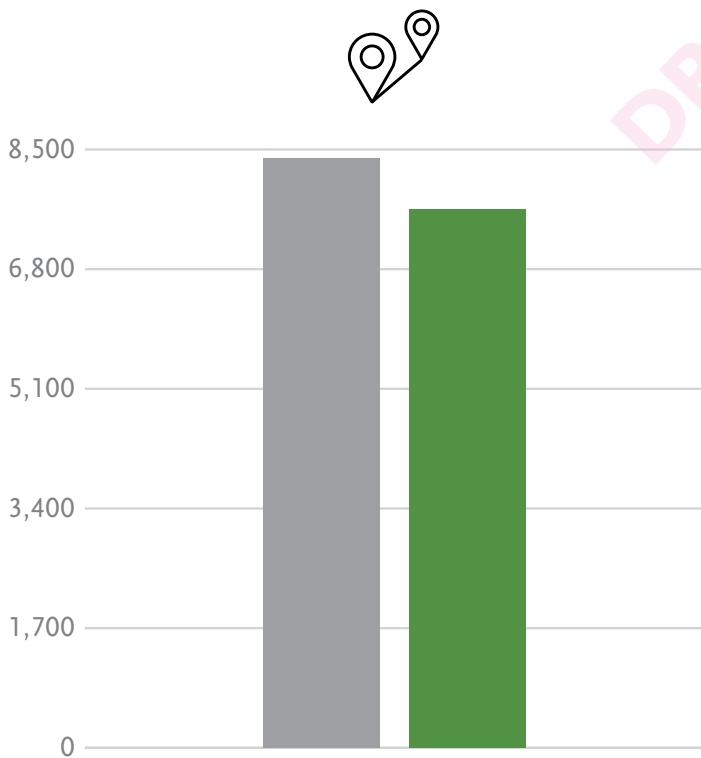
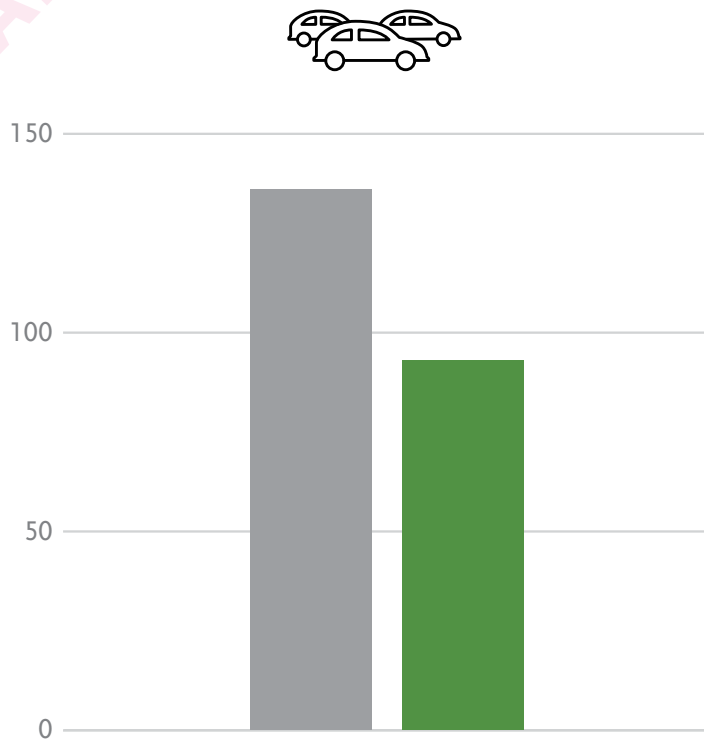


Figure 17

**Annual Vehicle Hours of Delay Per Capita**



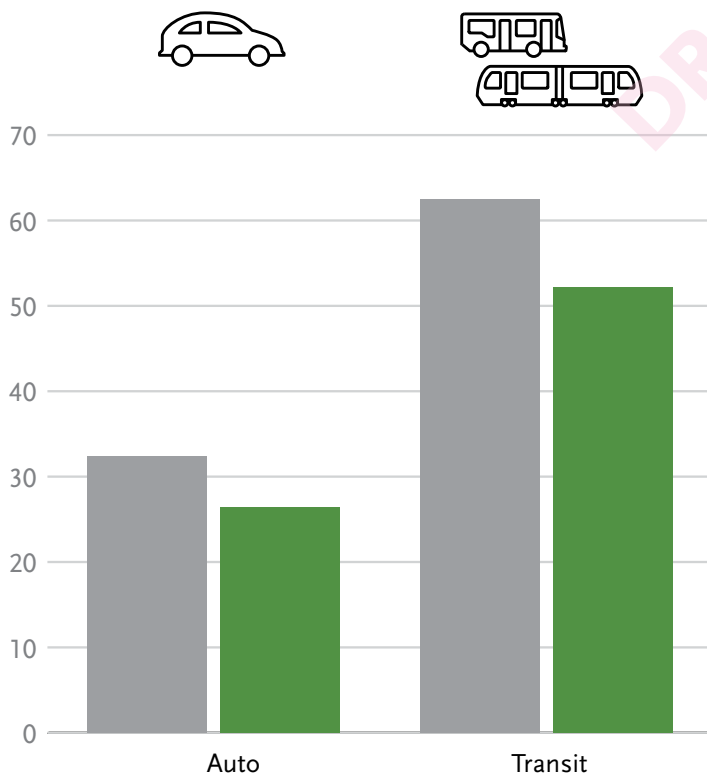




Less congestion means better travel times for commuters. Compared to the future trend, the 2020 LRTP is projected to reduce average morning travel times by 19% for automobiles and 9% for transit trips.

Figure 18

**Average Morning Travel Time (minutes)**



OUR  
NEXT  
LA\* is

*complete streets.*

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*Complete streets* create a comprehensive, integrated network that utilizes infrastructure and design to allow safe and convenient travel along streets for all users. This means better connectivity and integration of all transportation modes, including active transportation, private vehicles, transit and commercial deliveries. Complete streets provide safer crossing and roadway facilities for bicyclists and pedestrians, have more greenery and fewer potholes, and help create a more environmentally sustainable transportation system.



# We're investing in better options for bikes and pedestrians.

The 2020 LRTP includes close to \$7 billion in funding for active transportation projects, including major facilities and bicycle and pedestrian programs at the city level. There are several major multi-use active transportation facilities funded in the LRTP, including:

> **Rail to Rail Active Transportation Corridor Segment A**

The Rail to Rail Active Transportation Corridor is a 5.6 mile multi-use path connecting the Fairview Heights Station of the soon-to-be-open Crenshaw Line in Inglewood to the Slauson A (Blue) Line station in South Los Angeles.

> **LA River Path – Central LA**

The Los Angeles River Path project is an eight-mile bicycle and pedestrian path gap closure between Elysian Valley and Maywood, through downtown Los Angeles.

> **LA River Path – San Fernando Valley**

To complete the full LA River Path and Greenway Trail, the LA River Path will connect the San Fernando Valley to the existing LA River Path near Griffith Park. This 13-mile path will help create a 52-mile continuous active transportation corridor from Long Beach to Warner Center, and be a cornerstone of the efforts to revitalize the LA River.

## Active Transportation

In addition to the major capital commitments, Metro supports active transportation to promote walking, cycling and rolling through a series of programs, policies and investment strategies. Three important foundational documents include Metro's Complete Streets Policy (2014), First/Last Mile (FLM) Strategic Plan (2014), and Active Transportation Strategic Plan (2016).

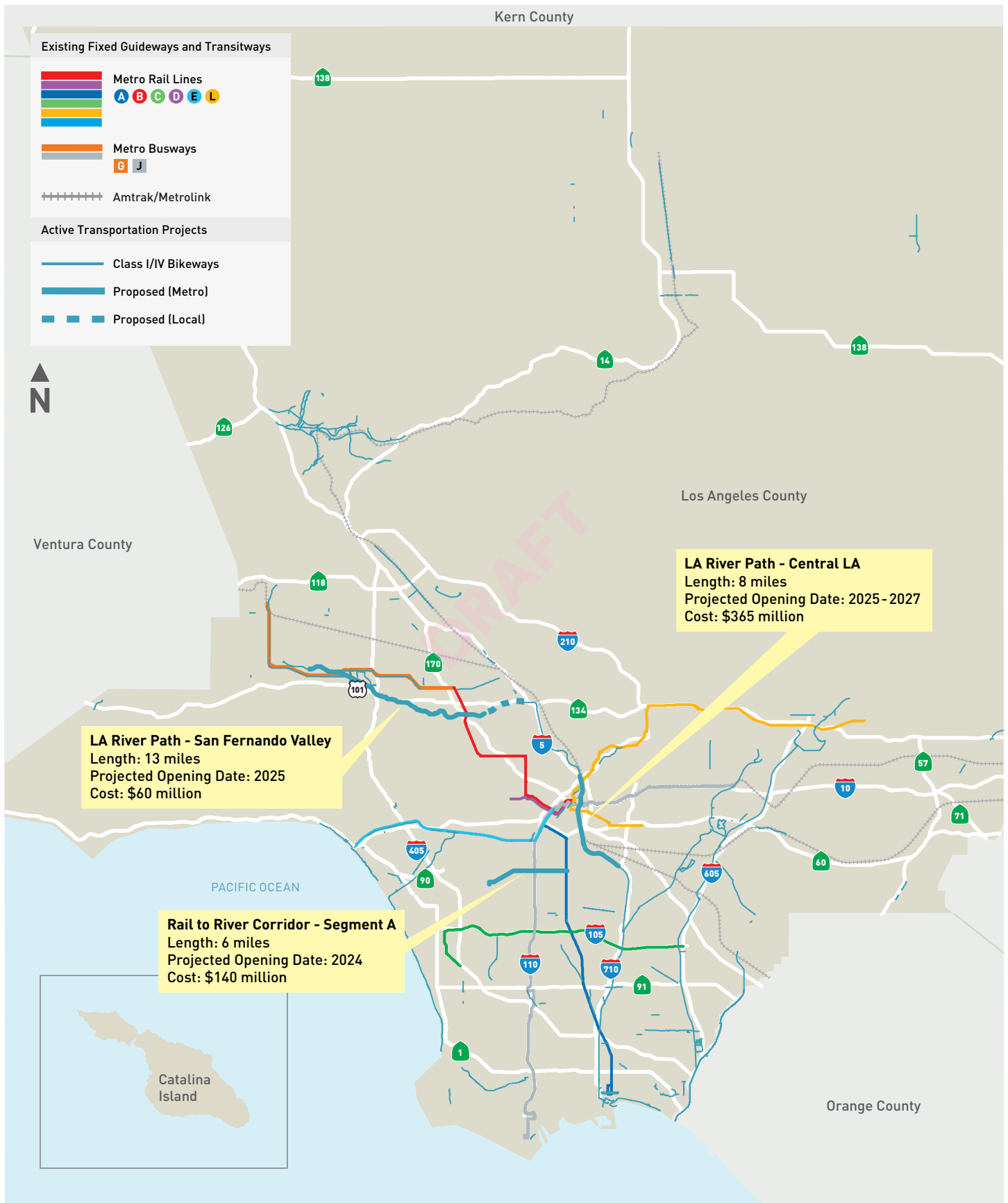
Metro is investing more than \$850 million in Active Transportation grants, in alignment with Metro policies and plans. This demonstrates Metro's ongoing commitment to enhance access to transit stations, create safer streets and develop a regional network to improve mobility for people who walk, bike and take transit. Programs that support these policies include Metro's Bike Share program, our Bike Parking Program, and the First/Last Mile Program.

Finally, the majority of the planning and support for active transportation and complete streets projects occurs at the local level. Metro provides funding for local projects and partners with local jurisdictions to support and advance projects that further our regional priorities.



Figure 19

# ACTIVE TRANSPORTATION CORRIDOR PROJECTS



Final alignments to be identified during environmental processes.

## Priority Area 3: Complete Streets

### Strategy 3.1: Improve safety for all users

Metro's approach to safety is multi-pronged. The Complete Streets Policy is centered around redesigning streets with safety for all users as the top priority. Metro's vision is to prioritize safety in all projects with an overarching goal of reducing injuries and fatalities.

ACTION	NOW	SOON	FUTURE	BUILD	MANAGE	MAINTAIN	PARTNER
3.1a. Implement Complete Streets Policy	●				●		●
3.1b. Implement Bicycle Education Safety Team program	●					●	
3.1c. Prioritize and incorporate safety improvements in all projects to reduce injuries and fatalities	●			●	●		●

### Strategy 3.2: Enhance access to transit stations

Metro strives to enhance transit stations by implementing first/last mile projects and strategies that improve multi-modal access around stations.

ACTION	NOW	SOON	FUTURE	BUILD	MANAGE	MAINTAIN	PARTNER
3.2a. Implement First/Last Mile Program, including Board policy directives	●	●	●		●		●
3.2b. Implement integrated improvement plans for existing intermodal station facilities, including the Connect Union Station Action Plan	●		●	●			●
3.2c. Implement Micro Mobility Vehicles Program	●				●		●
3.2d. Provide secure bike parking options at transit stations	●			●			

### Strategy 3.3: Establish active transportation improvements as integral elements of the transportation system

Active transportation refers to any non-motorized mode of travel, including walking, biking and rolling. Safe and effective active transportation infrastructure, including addressing physical barriers like freeway, rail, and river crossings, is critical to Metro because these modes of travel provide connectivity to our transit hubs, promote public health and improve air quality.

ACTION	NOW	SOON	FUTURE	BUILD	MANAGE	MAINTAIN	PARTNER
3.3a. Complete LA River Path Project	●	●		●			●
3.3b. Complete Rail to River Active Transportation Corridor		●	●	●			●
3.3c. Implement recommendations of Active Transportation Strategic Plan		●	●		●		
3.3d. Support Metro Bike Share and local bike share programs expansion	●				●		●

## Complete Streets Policy

Metro's Complete Streets Policy views transportation improvements as opportunities to create safe, accessible streets for all users, including but not limited to pedestrians, public transit users, bicyclists, people with disabilities, seniors, children, motorists and movers of commercial goods. Through incremental changes in capital projects and regular maintenance and operations improvements, the street network will gradually become safer and more accessible for travelers of all ages and abilities. In partnership with state, regional and local efforts, this policy will create a more complete and integrated transportation network for all modes of travel in LA County.

## LA River Path

The Los Angeles River Path project is a proposed eight-mile bicycle and pedestrian path extension between Elysian Valley and Maywood, through downtown Los Angeles and the City of Vernon. The project aims to create a safe, accessible path for people walking, bicycling and rolling to get to destinations that matter in their daily lives. The project will close an existing gap in the Los Angeles River Bike Path and Greenway Trail, providing a seamless 52-mile bicycle and pedestrian route from the San Fernando Valley to Long Beach. Completing the LA River Path will enhance recreation, livability, regional connectivity and provide an outstanding user experience, access to opportunity and separation from vehicular traffic.



## First/Last Mile Strategic Plan

Metro developed a First/Last Mile Strategic Plan to address the challenge that riders face getting from their home to transit and from transit to their final destination. FLM strategies extend station areas, improve safety and enhance the visual aesthetic. The plan identifies barriers and potential improvements for the FLM portions of a transit trip. It provides a systematic yet adaptable vision for implementing FLM strategies, such as:

- > Infrastructure for walking, rolling and biking (e.g., bike lanes, bike parking, sidewalks and crosswalks)
- > Shared use services (e.g., bike share and car share)
- > Facilities for making modal connections (e.g., kiss and ride and bus/rail interface)
- > Signage and wayfinding, and information and technology that eases travel (e.g., information kiosks and mobile apps).



### Strategy 3.4: Maintain a state of good repair on roadways

A safe and reliable transportation system requires that assets are maintained in a state of good repair. Metro partners and funds highway projects that upgrade or replace roadway elements to improve system safety.

ACTION	NOW	SOON	FUTURE	BUILD	MANAGE	MAINTAIN	PARTNER
3.4a. Fund highway and arterial projects with state of good repair elements	●						●
3.4b. For more efficient investment, work with Caltrans to combine state highway repair and maintenance projects with Metro-funded capacity and operational enhancements	●					●	●

### Strategy 3.5: Demonstrate sustainable design and construction practices

Metro strives to incorporate sustainable design and construction practices that reduce the impact of system growth. Metro aims to expand and improve the policy and related sustainability standards, while pursuing certifications set by national and state green building agencies.

ACTION	NOW	SOON	FUTURE	BUILD	MANAGE	MAINTAIN	PARTNER
3.5a. Improve sustainability standards for project design and expand the Green Construction Policy (GCP)	●			●			
3.5b. Pursue green certification and implement sustainability and resiliency technical requirements and specifications	●			●			

### Strategy 3.6: Reduce regional GHG and criteria air pollutant emissions

Metro is committed to reducing greenhouse gas (GHG) emissions and air quality pollutants. Transportation has the most significant impact on regional emissions, and to do our part, Metro plans to reduce our agency emissions by 79% relative to 2017 levels.

ACTION	NOW	SOON	FUTURE	BUILD	MANAGE	MAINTAIN	PARTNER
3.6a. Implement projects identified in the Energy Conservation Project Portfolio	●			●			
3.6b. Decarbonize Metro's energy and fuel supply	●				●		
3.6c. Implement a Scheduled Maintenance Program for stationary and mobile emissions sources to reduce emissions	●					●	
3.6d. Support local and regional projects that decrease GHG emissions or reduce single-occupant vehicle (SOV) trips	●			●			●



## Green Construction

Metro established a Green Construction Policy (GCP) in 2011 to reduce emissions during construction, as well as the Sustainability Plan Program to assist contractors with meeting CALGreen obligations. The GCP was updated in 2018, requiring contractors to use renewable diesel for all diesel engines and thus reducing the negative health impacts from diesel exhaust. This effort reaffirms Metro's commitment to protect the communities we serve, especially those disproportionately affected by air pollution.



## Zero-Emission Fleet

Metro will transition to zero-emission buses systemwide. The G Line (Orange) will be the first to deploy electric-battery buses as part of its improvements project, scheduled for completion by 2025. Originally planned by 2040, Metro would like to fully electrify by 2030. Metro is also taking the lead in forming a Countywide Zero-Emission Trucks Collaborative to promote consistency among public agencies in working to catalyze the development and deployment of zero-emission trucks in LA County, beginning with the I-710 Clean Trucks Program. This collaborative will include the Ports of Long Beach and Los Angeles, Caltrans, Southern California Association of Governments and the South Coast Air Quality Management District.



# Our plan helps reduce emissions, for a healthier LA.

Safety and environmental sustainability are core tenets of Complete Streets strategies. The 2020 LRTP will help Metro reduce our emissions and the emissions of the transportation sector as a whole. The improvements are projected to decrease greenhouse gas (GHG) emissions by 19% and particulate matter emissions by 17% relative to the future trend.

■ **Future Trend (2047)**  
■ **With 2020 LRTP (2047)**

Figure 20

Annual Million Metric Tons of CO2 Equivalent

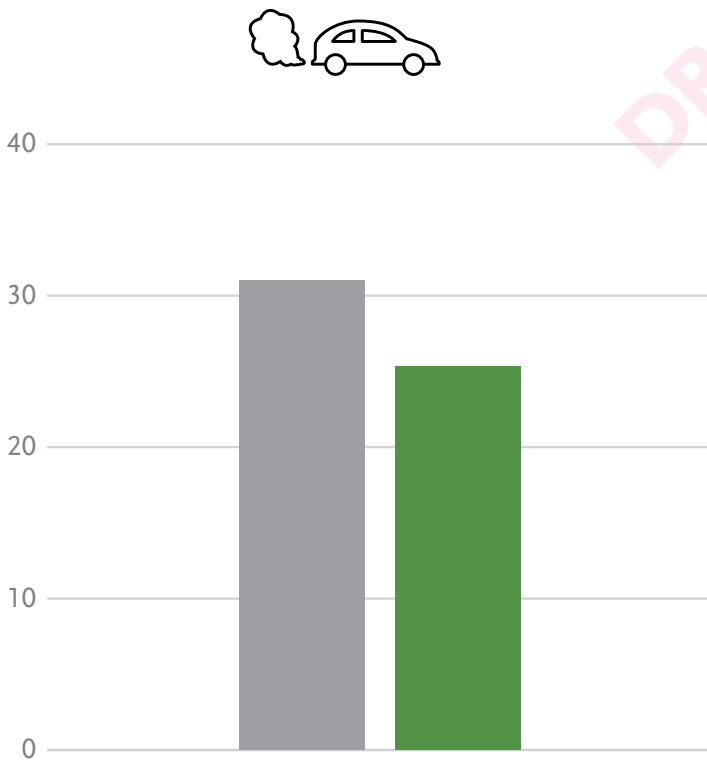
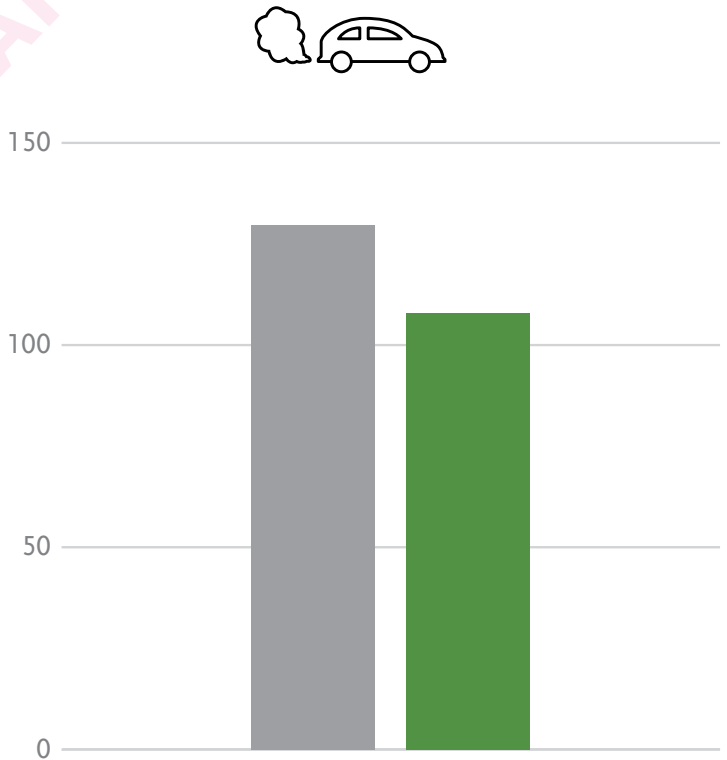


Figure 21

Annual Tons Particulate Matter (PM10)








Harbor Gateway Station, *Dreams*,  
Béatrice Coron, artist.



**OUR  
NEXT  
LA\* *is access  
to opportunity.***

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*Access to opportunity* means investing in communities to connect people to what they need. Travelers must get to where they need to go, when they need to be there – from their home to their job to their daily activities. Increasing access to opportunity brings better transit closer to jobs and homes, and supports small businesses, local economies and families.

# We're investing in opportunity for communities that need it most.

For a transportation system to be successful it must allow everyone it serves to reach the things they need within a reasonable period of time. Access to jobs, education, healthcare, and other essential services must be the primary focus of transportation, as a stable foundation for vibrant communities. As stewards of the transportation system, Metro is responsible for providing transportation options, improving access, and investing in communities.

In 2018, Metro adopted its Equity Platform to help ensure system changes prioritize those most in need of improved access to opportunity. Metro recognizes that there are deep-rooted and pervasive racial and socioeconomic inequities that create disparate results and impacts, even when the intention is to help all. Accordingly, we need an understanding of those disparities and an intentional focus on those faring the worst in order to truly improve access to opportunity for all. The Equity Platform is structured around four pillars:

- I. Listen and Learn
- II. Define and Measure
- III. Focus and Deliver
- IV. Train and Grow.

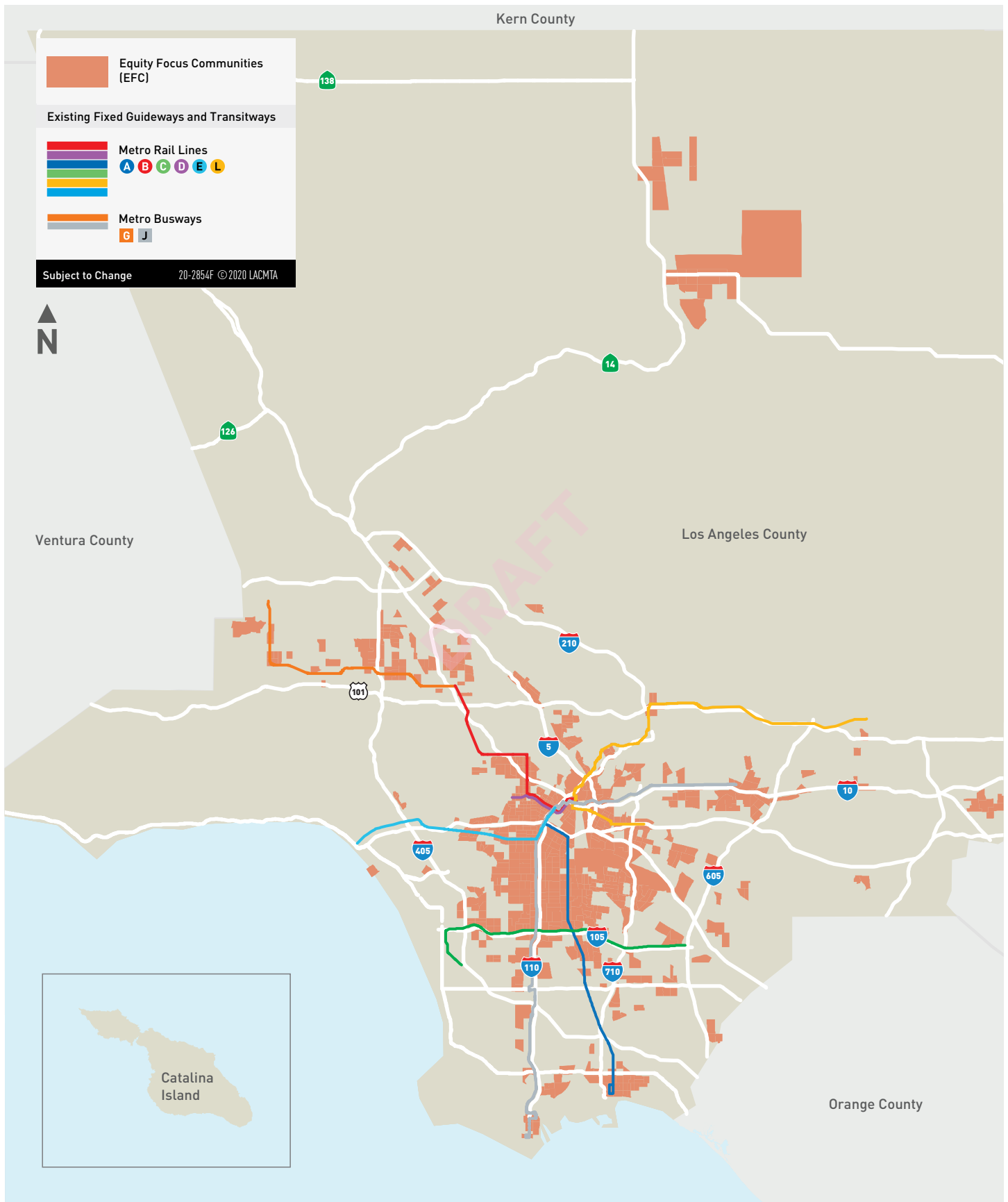
The LRTP was developed in accordance with these pillars, through robust public engagement, as well as clearly defining our goals and performance measures for tracking our effort to deliver better future access and mobility. This process and evaluation will ensure that Metro is transparent in our activities, that we continue to learn from our stakeholders, and that we use our resources effectively to benefit our communities.

## Equity Focus Communities

As part of the LRTP, Metro has defined “Equity Focus Communities” (EFCs) as those communities most heavily impacted by gaps in inequity throughout the County. These communities represent geographic areas that have the following socioeconomic characteristics; more than 40% of households are low-income and either 80% of households are non-white or 10% have no access to a vehicle. Collectively, these areas represent about 30% of the county's population. EFCs are communities that have experienced historic disinvestments, reduced access to opportunity and housing, and policy decisions that have resulted in environmental justice disparities. As such, these communities have higher degree of various negative outcomes and are those with the greatest need.

Figure 22

# METRO DESIGNATED EQUITY FOCUS COMMUNITIES



## Priority Area 4: Access to Opportunity

### Strategy 4.1: Advance equity through institutional transformation to eliminate disparities

Transportation can play an important role in economic development, increased opportunity and upward mobility. Metro seeks to ensure our programs, policies and investments expand opportunities for the communities in most need.

ACTION	NOW	SOON	FUTURE	BUILD	MANAGE	MAINTAIN	PARTNER
4.1a. Implement Equity Platform	●				●		●
4.1b. Establish agency-wide definition of equity	●				●		
4.1c. Create and implement an equity assessment tool	●						●
4.1d. Prioritize investment to support those with the greatest mobility needs	●						●
4.1e. Prioritize improved access to opportunities for Equity Focus Communities	●			●			●
4.1f. Develop and advance a Racial and Socio-Economic Equity Action Plan		●			●		
4.1g. Explore funding opportunities and implementation strategies for Transit to Parks Strategic Plan			●				●

### Strategy 4.2: Reduce household expenses on transportation

After housing, transportation is the second largest cost for many LA County households. Metro has fare assistance programs for targeted populations, including low-income households, youth and students.

ACTION	NOW	SOON	FUTURE	BUILD	MANAGE	MAINTAIN	PARTNER
4.2a. Expand Low-Income Fare is Easy (LIFE) Program	●				●		
4.2b. Continue Youth on the Move Program	●				●		
4.2c. Continue U-Pass Program	●				●		
4.2d. Partner with transportation network companies (TNCs) to reduce the cost of accessing stations	●						●
4.2e. Explore free fares for students and the general public			●		●		●
4.2f. Complete Comprehensive Pricing Study to identify and evaluate pricing policy options relative to the goals of revenue, equity, security, ridership, and user experience	●				●		



### Defining Equity

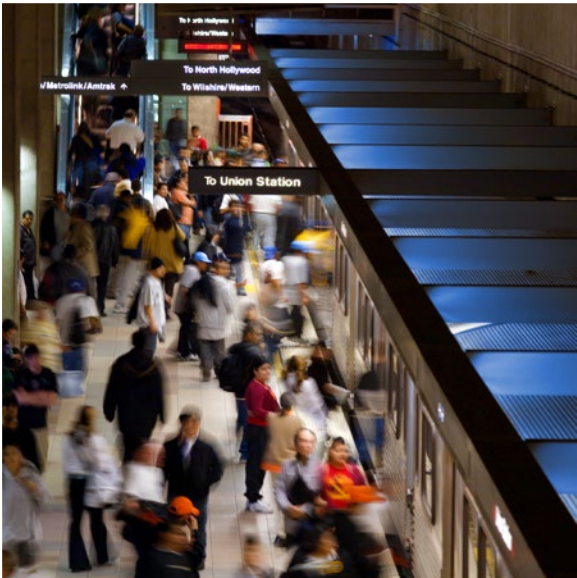
As part of our commitment to the Equity Platform Framework, Metro has developed the following definition of equity:

Equity is both an outcome and a process to address racial, socio-economic and gender disparities, to ensure fair and just access – with respect to where you begin and your capacity to improve from that starting point – to opportunities, including jobs, housing, education, mobility options and healthier communities. It is achieved when one’s outcomes in life are not predetermined, in a statistical or experiential sense, on their racial, economic or social identities.

It requires community informed and needs-based provision, implementation and impact of services, programs and policies that reduce and ultimately prevent disparities.

### Reduced Transit Fares

The Low-Income Fare is Easy (LIFE) program provides transportation assistance to low-income individuals in LA County. LIFE offers fare subsidies that may be applied toward the purchase of fares on Metro, any LIFE-participating transit agencies or free regional ride options. Reduced fare TAP cards are also eligible for additional savings with LIFE. Once enrolled, LIFE benefits can be loaded onto TAP cards at any participating vendor. Metro is considering free transit for students, and if additional revenue is raised through congestion pricing, Metro could subsidize transit for all riders.



## Strategy 4.3: Build affordable housing near transit

Metro is working with our partners to address LA County's housing and affordability crisis through several initiatives aimed at developing more and affordable housing near transit.

ACTION	NOW	SOON	FUTURE	BUILD	MANAGE	MAINTAIN	PARTNER
4.3a. Implement Transit Oriented Communities (TOC) Policy	●						●
4.3b. Implement Joint Development Program	●						●
4.3c. Partner to build affordable transit-oriented housing	●						●

### Transit Oriented Communities (TOC)

In June 2018, the Metro Board of Directors adopted the TOC Policy, an ambitious effort that elevates Metro's commitment to prioritize equity and consider land use and community development as we plan and implement the transit system.

TOCs are places (such as corridors or neighborhoods) that, by their design, allow people to drive less and access transit more. A TOC maximizes equitable access to a multi-modal transit network as a key organizing principle of land use planning and holistic community development. TOCs differ from Transit Oriented Development (TOD) in that TOD is a specific building or development project that is fundamentally shaped by proximity to transit.

TOCs promote equity and sustainable living in a diversity of community contexts by:

- > Offering a mix of uses that support transit ridership of all income levels (e.g., housing, jobs, retail, services and recreation)
- > Ensuring appropriate building densities, parking policies, and urban design that support accessible neighborhoods connected by multi-modal transit
- > Elevating vulnerable users and their safety in design
- > Ensuring that transit related investments provide equitable benefits that serve local, disadvantaged and underrepresented communities.

In addition, the TOC Policy formalizes Metro's commitment to partner with the 88 cities and unincorporated areas in LA County and local communities to support "TOC activities". These activities are largely community development activities and support the TOC program's goals:

- > **Increase transportation ridership and choice**
- > **Stabilize and enhance communities surrounding transit**
- > **Engage organizations, jurisdictions and the public**
- > **Distribute transit benefits to all**
- > **Capture the value created by transit**

Metro's Joint Development program, whereby Metro partners with developers to build TODs on Metro-owned properties, is a key program where we can help foster equitable TOCs. Metro's Joint Development sites are a gateway to the Metro transit system and hold unique potential to advance community development goals while attracting new riders to transit.

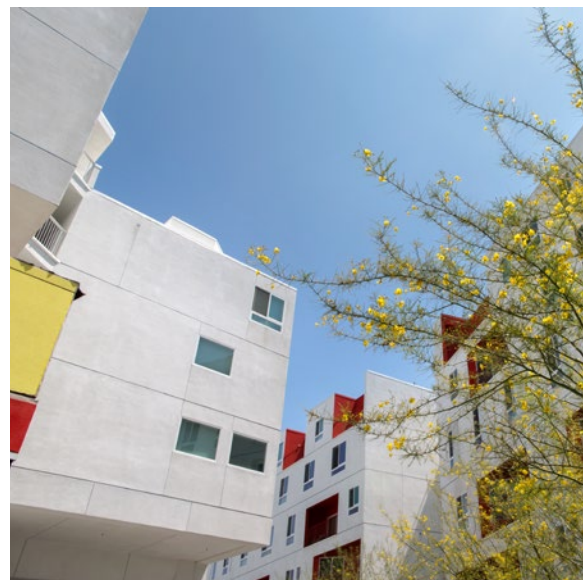


Figure 23

# JOINT DEVELOPMENT PROJECTS



- 2 Grand Central Market
- 3 Willow
- 4 Hollywood/Highland
- 5 Del Mar
- 6 Sierra Madre Villa
- 7 Wilshire/Vermont Apts and School
- 8 Wilshire/Western
- 9 Hollywood/Vine
- 10 Hollywood/Western
- 11 Fillmore
- 12 Westlake/MacArthur Park (Phase A)
- 13 One Santa Fe
- 14 1st/Boyle
- 15 Taylor Yard Lots 1, 3, 4

- 2 North Hollywood
- 3 1st/Soto
- 4 1st/Lorena
- 5 Cesar Chavez/Soto
- 6 Cesar Chavez/Fickett
- 7 Division 6
- 8 Expo/Crenshaw
- 9 Mariachi Plaza
- 10 Vermont/Santa Monica
- 11 Little Tokyo/Arts District

\* Sites Metro currently has in construction; is in negotiations with a developer; is conducting community engagement to inform development guidelines; or has an active Request for Proposals (RFP) out.

- 2 Sepulveda Park & Ride
- 3 El Monte
- 4 Wilshire/Crenshaw
- 5 Wilshire/La Brea

\*\* Sites Metro expects to release a RFP for in the next one to three years.

## Strategy 4.4: Invest in the regional workforce

Metro is investing in the regional workforce through training, education and employment opportunities. Metro has several existing programs in this area and plans to open its transportation school in 2022.

ACTION	NOW	SOON	FUTURE	BUILD	MANAGE	MAINTAIN	PARTNER
4.4a. Expand training programs, career academies, apprenticeship programs and employment opportunities in LA County	●				●		●
4.4b. Implement Project Labor Agreement and Construction Careers Policy	●				●		
4.4c. Increase resources needed to train and place people in hard-to-fill positions (WIN-LA)	●				●		
4.4d. Develop logistics workforce initiatives and pilot programs		●					●

## Strategy 4.5: Expand opportunities for small businesses

Metro is committed to supporting small businesses and local economies through our contracting procedures, our projects in local communities and our direct investments.

ACTION	NOW	SOON	FUTURE	BUILD	MANAGE	MAINTAIN	PARTNER
4.5a. Ensure local transportation investments support local business district programs	●						●
4.5b. Support small businesses throughout construction (Business Interruption Fund and Business Solution Center)	●						●
4.5c. Expand Metro small business programs (DBE, SBE, and DVBE) through training, partnering and mentorship programs	●				●		●

## Strategy 4.6: Maximize our local investments

State and federal funding sources allow Metro to maximize our local resources. Metro continues to explore all funding opportunities and innovative project delivery mechanisms to increase the impact of our investments.

ACTION	NOW	SOON	FUTURE	BUILD	MANAGE	MAINTAIN	PARTNER
4.6a. Support local jurisdictions to submit competitive grant applications	●				●		●
4.6b. Deliver projects through alternative delivery models, including Public-Private Partnerships, as appropriate	●			●	●		●
4.6c. Leverage local transportation dollars to secure state and federal grants	●						●



### E3 Training Programs

Metro is investing in transportation workers through the E3 Initiative, to expose, educate, and employ the next generation of LA County. The initiative's mission is to prepare the LA County youth for career and college pathways in the global transportation infrastructure industry by teaching them transferrable industry skills. The programs include Metro's Transportation School, Teacher Externship Program, Entry Level Trainee Program, Transportation Career Academy Program, Rail Vehicle Maintenance Program at LA Trade-Technical College, Metro Joint Apprenticeship Committee (JAC), and Metro Bridge Academy.



### Supporting Local Business

Metro's Business Interruption Fund (BIF) provides financial assistance to small businesses impacted by rail construction and located along the following corridors: Crenshaw/LAX Transit Project; the Little Tokyo and 2nd/Broadway areas along the Regional Connector Transit Project; and the D Line (Purple) Extension.

Metro's Pilot Business Solution Center (BSC) provides hands-on business assistance and support services to small businesses along the Crenshaw/LAX Transit Project corridor during the years of construction.



# Our plan creates jobs and boosts LA's economic health.

The 2020 LRTP will benefit the local and regional economy. Direct and indirect economic benefits come from the expenditures on transportation projects. Furthermore, transportation system enhancements generate travel time savings, and increase economic output and competitiveness. Expenditures and improvements included in only the capital plan of the LRTP, not including the additional policies and programs, are anticipated to increase Gross Regional Product by \$196 billion and create 1.84 million jobs over the 30-year period.

Figure 24

## Net Jobs Created and Increase in Gross Regional Product from Capital Investment



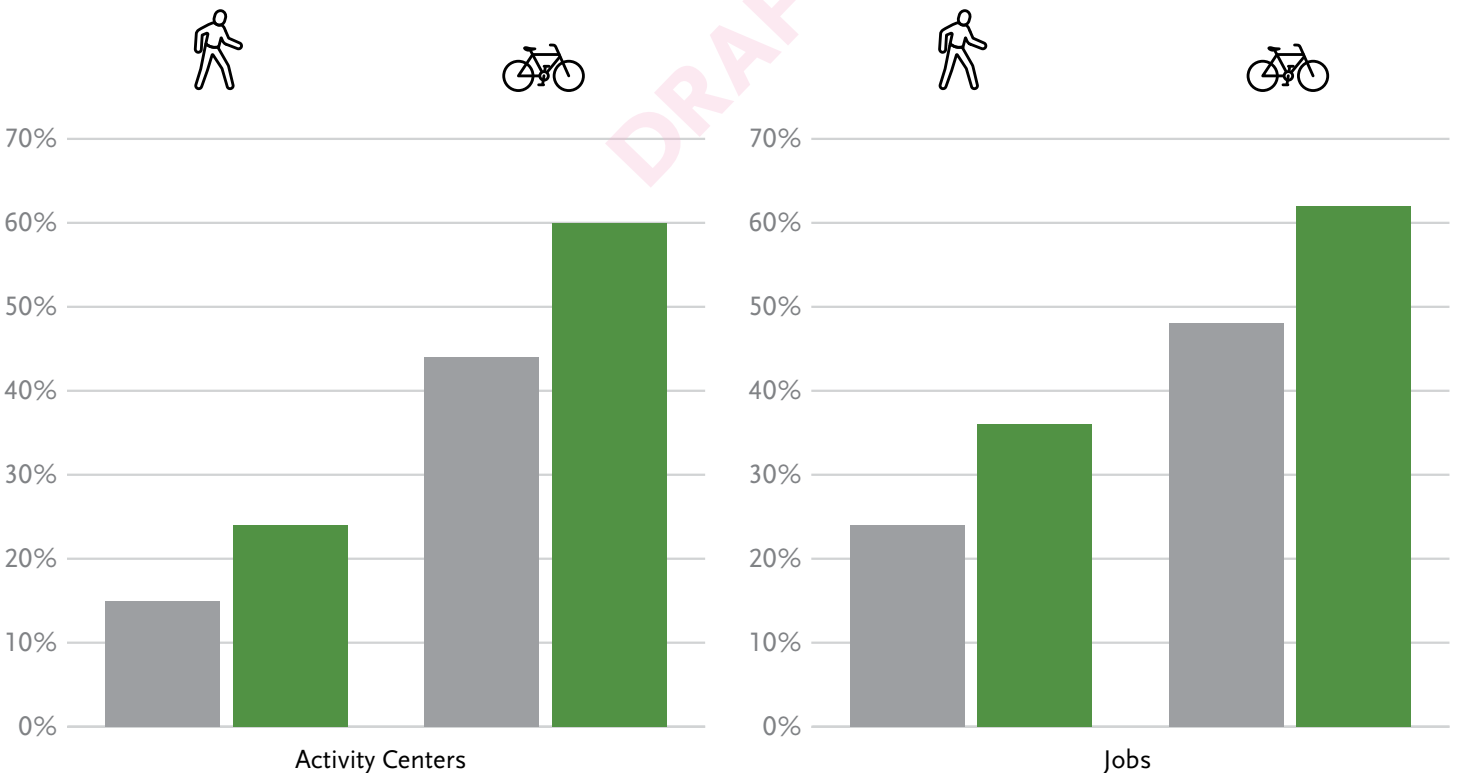
\*A single year of employment for one individual

Transit should connect people to where they want and need to go. The 2020 LRTP will increase the number of jobs and activity centers within a 10-minute walk or roll of fixed guideway transit. For example, it will bring about a 50% increase in jobs accessible and 60% of activity centers within a 10-minute walk of a transit station.

**Future Trend (2047)**  
 **With 2020 LRTP (2047)**

Figure 25

**Percent of Activity Centers and Jobs within a 10-minute Walk or Roll of Fixed Guideway Transit**



# We're funding a transportation revolution, \$400 billion strong.

The 2020 LRTP provides the funding for the largest public works projects in North America, identifying \$400 billion to be spent on transportation over the 30-year period. The LRTP financial forecast includes revenue from local sales tax, state sources, federal programs and other sources. Approximately 74% of funding is controlled by Metro, either from federal and state programs or through locally generated revenues. LA County has passed four separate ½-cent transportation sales taxes over the past 40 years: Proposition A (1980), Proposition C (1990), Measure R (2008) and Measure M (2016).

Figure 26 highlights the estimated funding by use. This includes all funding for capital projects, operations and maintenance countywide, including funding sources that Metro does not control. Almost half of the expenditures are capital investments for transit, highway or multi-modal projects, including the subregional funding programs and Local Return allocated to cities. Investment in active transportation makes up about \$6.9 billion of the 30-year total, included primarily under the roadways program. Transit operations, both rail and bus, comprise more than one-quarter of the estimated future expenditures.

The LRTP is a financially constrained plan, which means our committed investments are programmed to match our anticipated funding. The forecast is based on estimated sales tax growth and existing project cost estimates. Future changes may present challenges that must be balanced within a constrained plan and updated or amended as appropriate. The financial model anticipates growth over the 30-year forecast and some economic disruptions; however, the LRTP is a living document which can be regularly updated as needed.

Almost half of all the funding is derived from LA County's four transportation sales tax measures. State programs, bolstered by the recent passage of SB 1 (the Road Repair & Accountability Act of 2017), make up about 20% of the projected funding. Local funding sources, including transit fare revenue, contribute 17% and federal sources, once a large share of local transportation funding, is only 8% of the future funding.

While the expanded programs, partnerships and policies of the 2020 LRTP represent additional expenditures, these will be balanced by future revenues anticipated through future policies, such as ExpressLanes and congestion pricing.

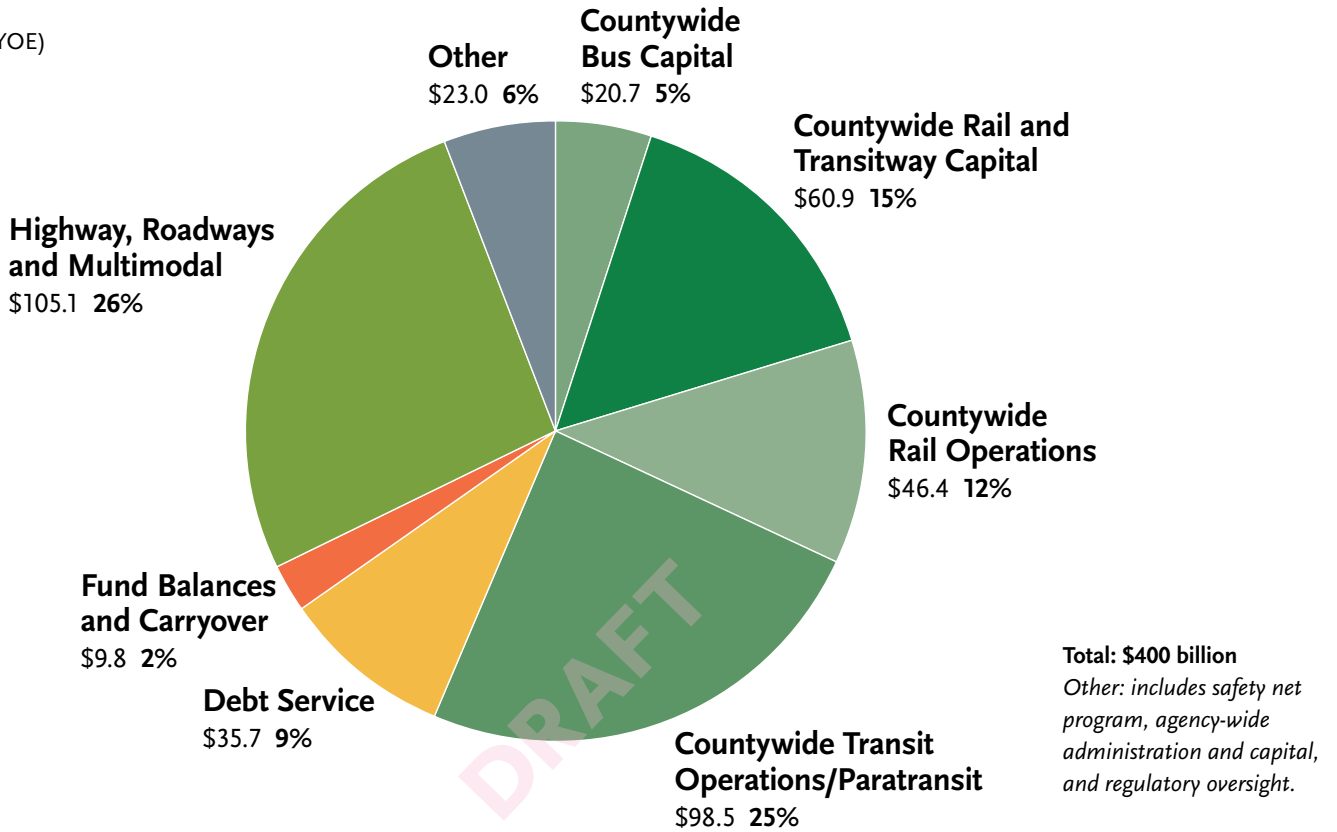


Figure 26

**Countywide Uses and Sources of Transportation Funding (FY2021–FY2050)**

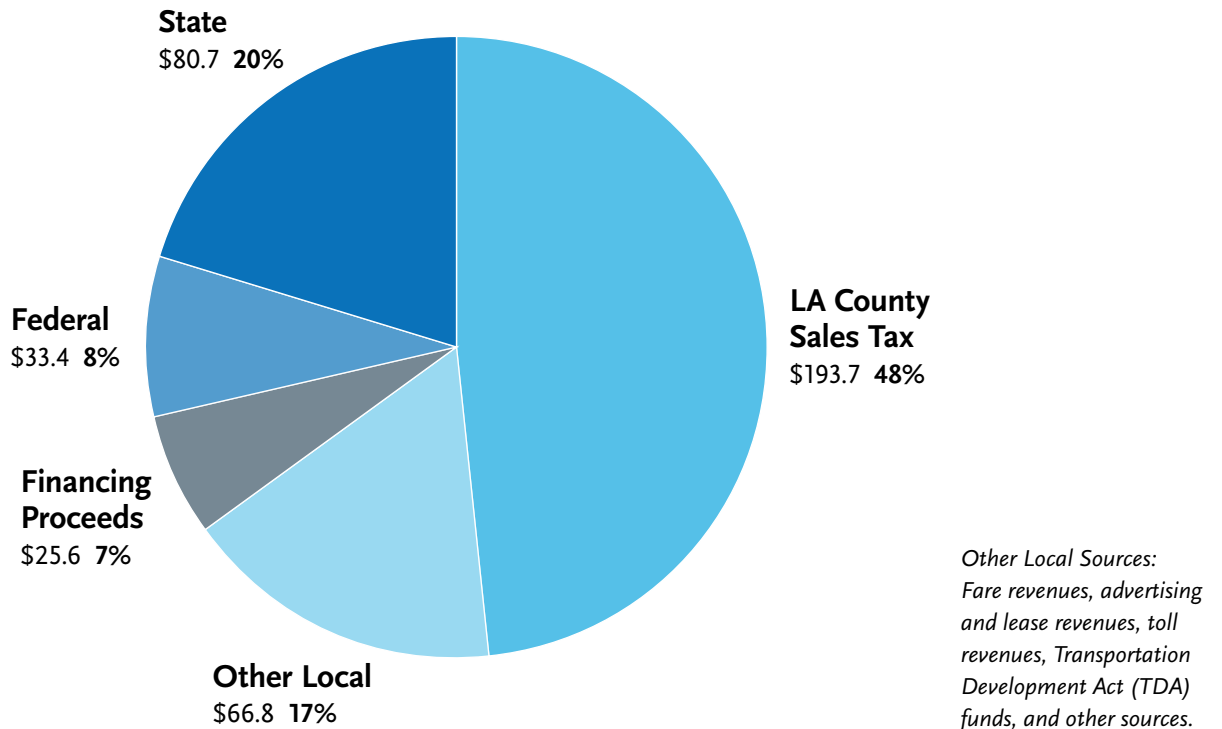
**Total Uses**

\$ in billions (YOE)



**Total Sources**

\$ in billions (YOE)



# Supporting Our Partners

Metro, as the Regional Transportation Planning Agency, is the recipient agency for many state and federal funding programs that pass through to local jurisdictions. Furthermore, Metro administers the revenue from the four LA County transportation sales taxes, each providing substantial transportation funding for local jurisdictions.

## Local Return

Local jurisdictions receive transportation funding from Metro through the Local Return program. Over the 30-year period, this amount is anticipated to be \$38 billion. The Local Return program is funded by each of the four sales taxes authorized by Metro, including 25% of Proposition A, 20% of Proposition C revenue, 15% of Measure R and 17% of Measure M (increasing to 20% in 2039).

The largest percentage of local return funding goes to support for local public transit and dial-a-ride services. Prop A required all funding be used for public transit; Prop C expanded the eligible uses of funding, but funded projects must demonstrate a public transit benefit or be performed on streets heavily used by public transit. Measures R and M expanded eligibility to most transportation purposes, and therefore, a large portion of local return funds are dedicated to active transportation projects, street resurfacing or other roadway improvements.



## Measure M Multi-year Subregional Programs

Measure M created 36 Multi-year Subregional Programs (MSP) that program \$13.5 billion to the nine subregions in LA County. These MSPs were created with input from the subregions and highlight the transportation priorities of various communities throughout LA County. Some subregions also dedicated resources to specific highway and transit projects included in the expenditure plan. The majority of the future MSP funding is allocated to roadway projects (56%) and a substantial amount is allocated to active transportation (23%) and transit (15%).

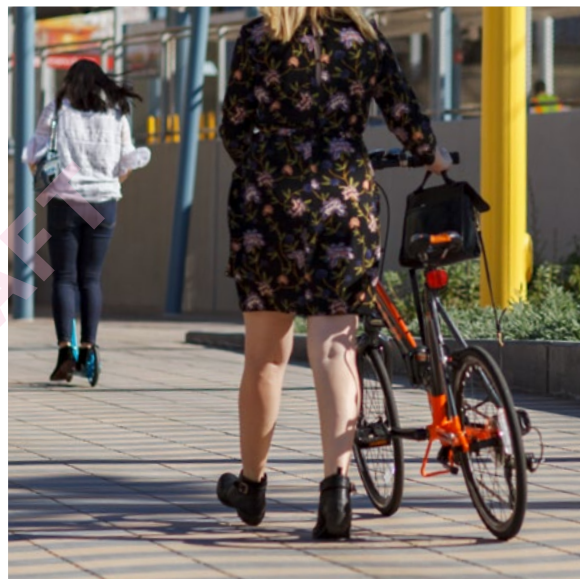
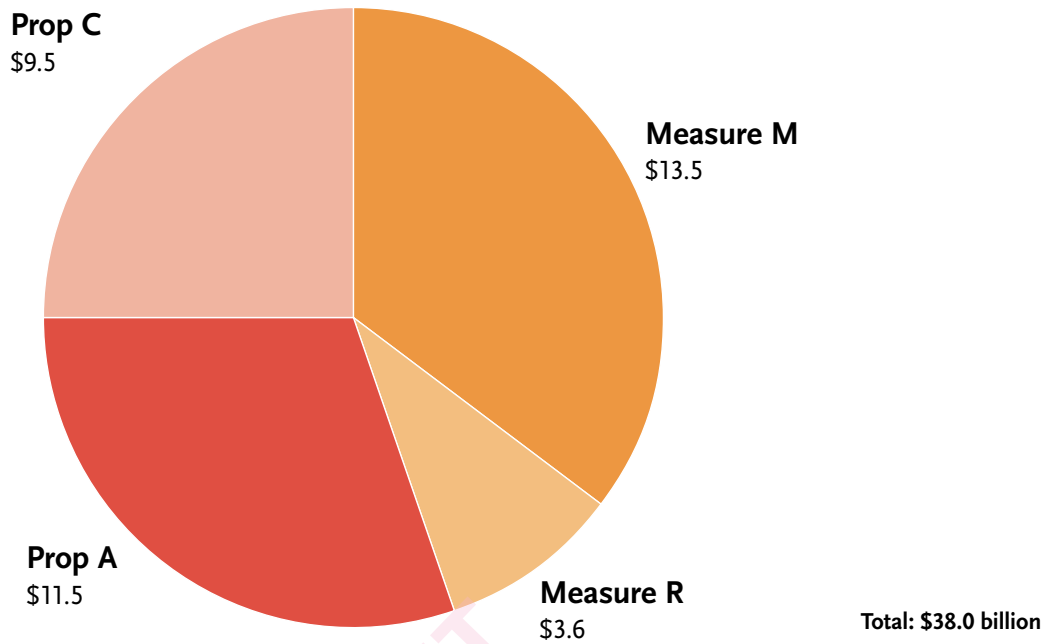


Figure 27

**Local Return Funding**

\$ in billions (YOE)

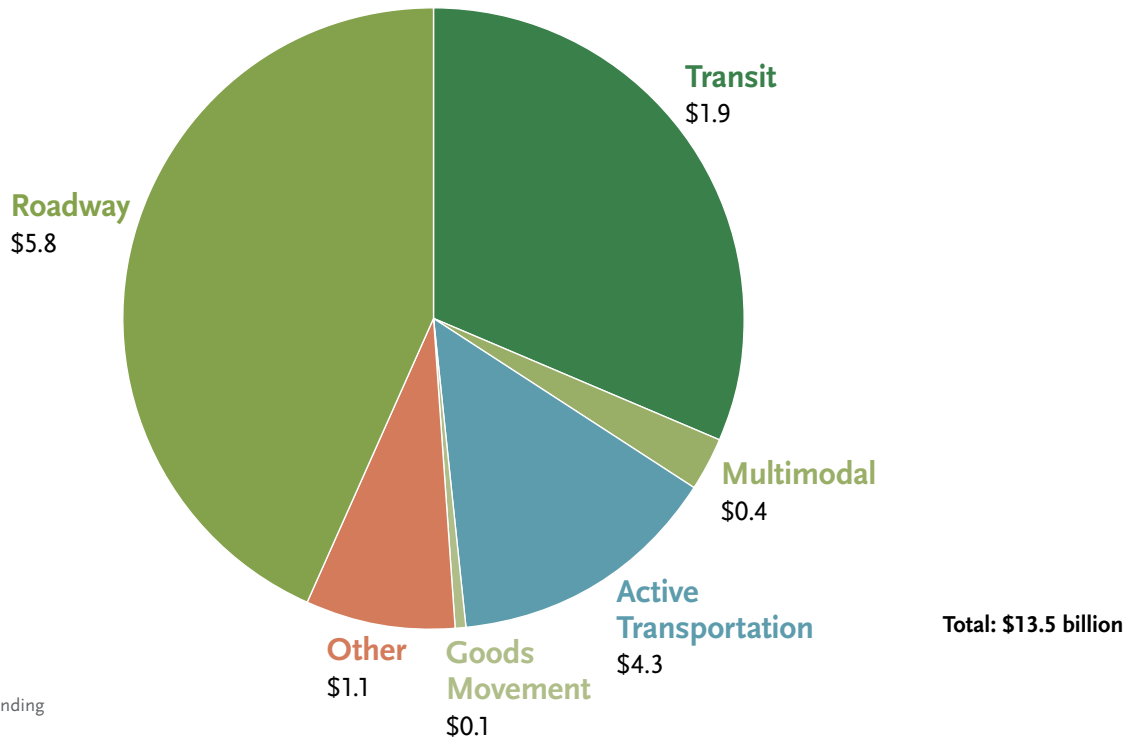


Numbers may not add due to rounding

Figure 28

**Multi-year Subregional Program Funding**

\$ in billions (YOE)



Numbers may not add due to rounding

# Operations & Maintenance

A functioning, high-quality transportation system is essential for the efficiency of the system and the safety of users. The cost to operate and maintain LA County's transportation system is substantial, and we must continue to invest the resources to operate, maintain and rehabilitate the transportation system, including the expanding transit system and the vast network of roadways, and bicycle and pedestrian facilities.

The 30-year estimate for operations and maintenance included in the 2020 LRTP is over one-half of the 30-year investment estimate, with an estimated \$169 billion in transit operations and state of good repair (SGR), and \$32 billion in freeway operations and SGR.

## Transit Operations and State of Good Repair (SGR)

LA County has almost 50 transit agencies that own more than 7,000 revenue vehicles, plus additional service vehicles, equipment and facilities. Metro bus and rail operations will require an investment of almost \$97 billion over the 30-year period, and an additional \$24 billion to rehabilitate and repair the assets. Municipal and local agency operations will require an additional \$33 billion.

## Metrolink

The Metrolink system provides high-speed, long-distance regional commuter rail service over 538 route-miles, carrying an average of 38,000 weekday passenger trips. Metrolink is governed by the Southern California Regional Rail Authority (SCRRA), a joint powers authority representing the transportation commissions of Los Angeles, Orange, Riverside, San Bernardino and Ventura Counties. LA County, through Metro, provides an operating subsidy for Metrolink. Over the 30-year period, the 2020 LRTP financial plan assumes Metrolink funding amounts totaling over \$800 million in state of good repair, \$6.7 billion in operations and \$1.3 billion in capital expansion.

## Access Services

Metro provides funding for countywide paratransit service for the elderly and people with disabilities, operated by Access Services. A flexible service paratransit is a federally mandated right through the Americans with Disabilities Act (ADA) for persons with disabilities who cannot access fixed-route buses and trains. Paratransit, typically provided in vans or mini-buses, is on-demand and does not follow fixed routes or schedules. A total of \$8.5 billion will be needed to operate paratransit over the 30-year period.

## Roadway Operations

Highway and arterial operations and maintenance include activities to keep roadways properly maintained, such as roadway resurfacing and bridge rehabilitation, as well as solutions to improve the operational efficiency of the system. Examples of these strategies include traveler information, intelligent transportation systems (ITS) and incident management solutions.

Transportation System Management (TSM) strategies are tools that use traffic engineering and operational measures to maximize capacity and reduce traffic delays on streets and highways. Intelligent Transportation Systems (ITS) strategies, such as the Regional Integration of ITS (RIITS) program, are low-cost and dramatically improve traffic flow, movement of vehicles and goods, system reliability, air quality, and safety.

Freeway Service Patrol (FSP) is a congestion mitigation program managed in partnership with Metro, California Highway Patrol (CHP) and Caltrans on all major freeways in LA County and is the largest of its kind in the nation, performing approximately 25,000 assists each month. The program utilizes a fleet of patrolling tow and service trucks designed to quickly remove disabled passenger vehicles and freight trucks.

## Roadway State of Good Repair

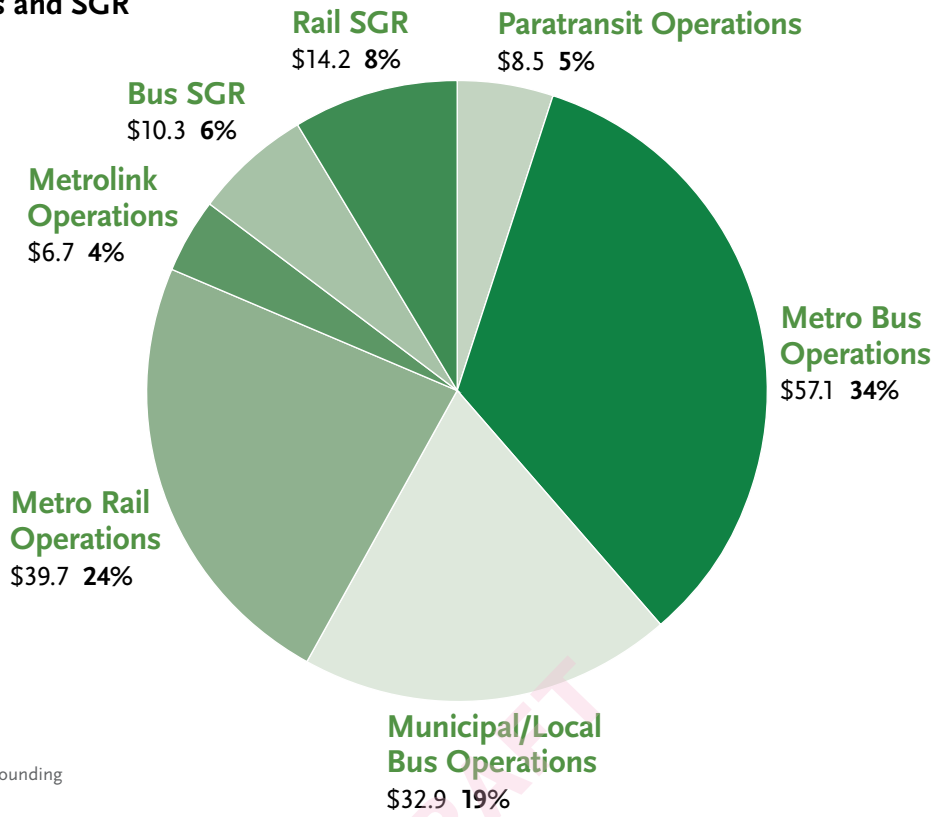
The State Highway Operations and Protection Program (SHOPP) is a Caltrans program to rehabilitate California's highway system. The program identifies and approves funding for projects consistent with California's Transportation Asset Management Plan. Over a 30-year period, the estimated funding available in LA County through the SHOPP program is close to \$22 billion. Local roadway rehabilitation is funded in large part by the Local Return program, described above.



Figure 29

**Transit Operations and SGR**

\$ in billions (YOE)

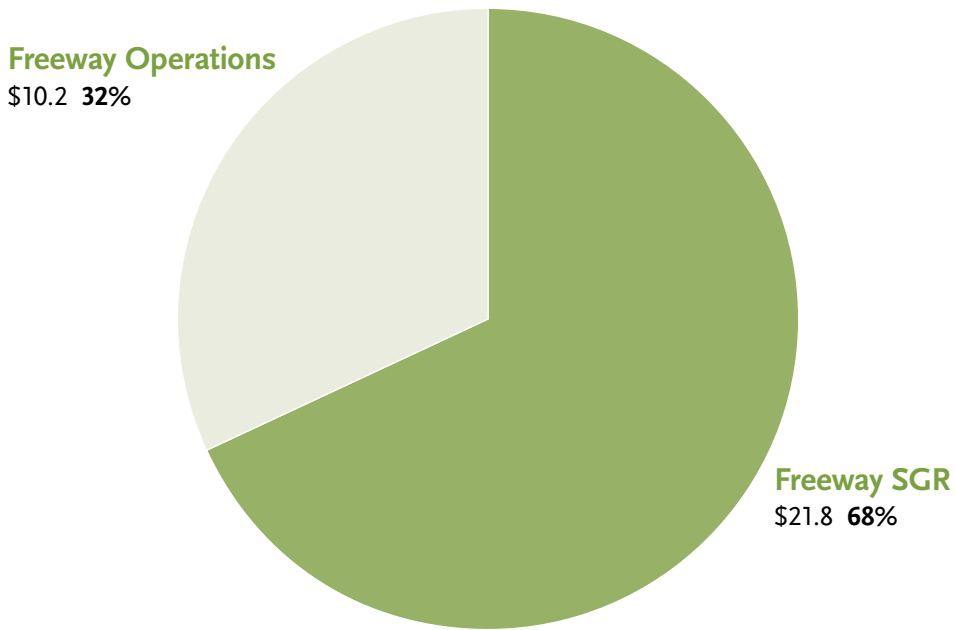


Numbers may not add due to rounding

Figure 30

**Freeway Operations and SGR**

\$ in billions (YOE)



Numbers may not add due to rounding

# We're also building bold new programs and policies.

The preceding investment plan is the backbone of the LRTP, highlighting LA County's commitment to expanding transit, maintaining the transportation system, and facilitating the movement of people and goods. However, this investment alone will not address the challenges facing our region.

LA County must support the capital program by advancing additional policies and programs to catalyze the investment and bring about the transportation system benefits that are needed for the region, without creating additional financial burdens. To this end, Metro must provide more and better transportation options, and incentivize transit and active travel modes.

## Provide More and Better Transportation Options

Better transportation options mean providing multiple viable transportation choices that meet the needs of travelers with different requirements, desires and means. Solutions include:

- > **Complete the ExpressLanes Strategic Network.** Completing the Tier 1, Tier 2 and Tier 3 ExpressLanes network (see page 43) would add high-occupancy toll lanes to the majority of LA County freeways. ExpressLanes free up capacity on general purpose lanes, generate revenues and offer a faster, more reliable trip for those who carpool or who are willing to pay the toll.
- > **Improve bus speeds.** Improving transit travel times is crucial to making transit competitive with driving private automobiles. To improve speeds, Metro is implementing transit priority initiatives and bus speed improvement projects, such as all-door boarding, making fare payment easier, bus stop optimization, signal synchronization and transit signal priority. However, to truly make transit competitive and realize the goals in Vision 2028, the NextGen Bus Plan must implement a network of bus rapid transit routes and bus-only lanes. This will require a commitment and strong partnership with local cities to dedicate roadway space to transit.
- > **Promote Trip Reduction Strategies.** Providing meaningful travel choices means that Metro must continue to provide and support travel solutions that align with our current and future priorities. Metro recognizes that telecommuting has grown steadily over the past decade and that COVID-19 has dramatically accelerated that trend. An increase in delivery services and virtual engagement practices also have reduced the need for personal travel. We will continue to collaborate with our local partners to support trip reduction benefits and opportunities, as part of our efforts to manage travel demand, reduce the number of SOV trips, and provide new transportation options.

## Incentivize Transit and Active Travel Modes

Incentivizing transit and active transportation requires policies that make these modes more attractive compared to driving a private automobile. Solutions include:

> **Explore implementation of pilot traffic reduction program.**

As part of a pilot program to improve mobility in a congested area of LA County, Metro is exploring congestion pricing strategies coupled with a package of transportation improvements with the goals of providing more travel options, improving equity, and increasing environmental benefits. Metro will work with our partners to implement a pricing program that meets our mobility goals while balancing equity and economic concerns.

> **Provide more affordable transit.** Decreasing transit fares can potentially boost transit ridership. In order to meet our transit ridership goals, Metro must expand our reduced fare programs and make fare payment easier. Metro will assess current and new pricing models to develop a simplified, fiscally sustainable, system-wide approach to pricing that addresses affordability concerns for low-income and disadvantaged populations, while also providing better mobility and security for all users across Metro's portfolio of transportation services.

> **Expand first/last mile connectivity.** Metro will work with local and regional partners to improve access to transit by removing barriers to transit stations or destinations. We will collaborate with our partner agencies to dramatically increase the regional network of active transportation facilities, including shared-use paths and on-street bikeways, and develop a funding strategy to get them built.

> **Support transit-oriented communities.** We will implement a comprehensive approach to facilitating development on Metro-owned land around high-quality transit stations and will quantify the impact of these developments within a one to one-and-a-half-mile radius in the transit corridor. Metro will develop programs and processes, new policies and special projects that reflect Metro's commitment to realizing holistic, inclusive community development and land use planning along existing and proposed transit corridors. This effort disseminates a vast array of TOC initiatives along with lessons learned for Metro, its external partners and peer transit agencies.



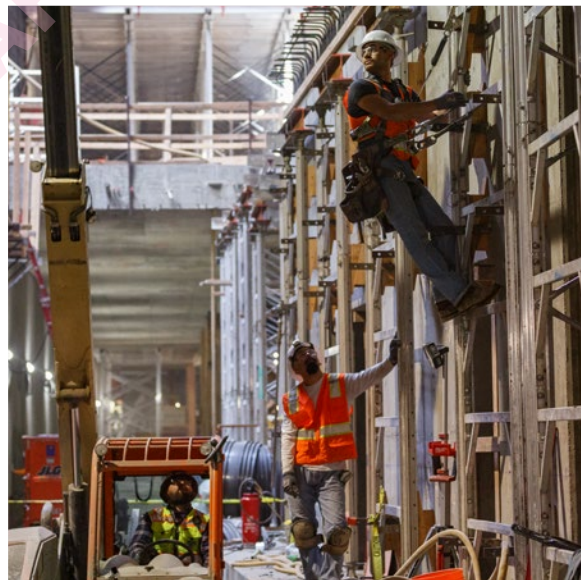
# Plans for today, and the decades to come.

The 2020 LRTP is a financially constrained plan that examines how Metro's future transportation investments can be leveraged to achieve the maximum mobility benefits for all of LA County. It is the culmination of two years of sustained community engagement to establish stakeholder priorities, as well as technical analysis to determine the anticipated benefits of the LRTP over the next 30 years.

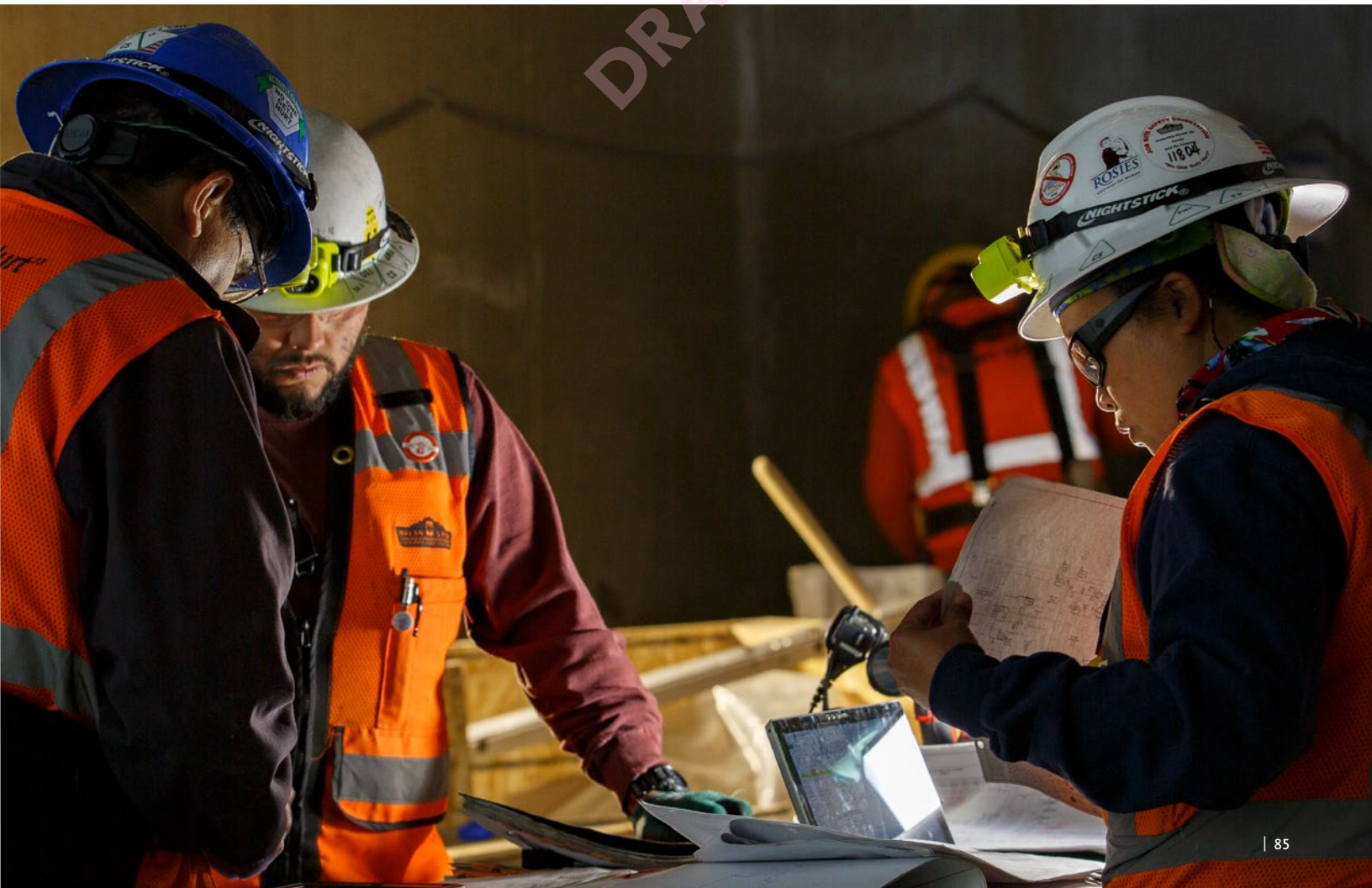
Building transportation infrastructure creates economic benefits. The jobs, spending, and increased access that these investments represent are needed now, more than ever. Our challenge is to proceed systematically, prioritizing strategies within this plan. The prioritization of Metro's infrastructure investments is the next step, which will be firmly rooted in equity and sustainability.

Metro's forthcoming Short Range Transportation Plan (SRTP) is a 10-year action plan for the investments, policies, and system improvements needed to advance the 2020 LRTP. The SRTP will acknowledge and analyze the region's new travel patterns and address regional economic recovery and resilience, while continuing to improve regional mobility, air quality, social justice and the advancement of equity. The SRTP will focus on achieving these outcomes through the transparent development of a fiscally responsible action plan that recognizes the near-term system improvements necessary to ensure maximum return on our transportation investments.

As part of the SRTP development Metro will create a strategic project list to include ideas for additional improvements through partnership priorities. The strategic project list will build upon the Mobility Matrix process previously established as part of Measure M, and other partner initiatives, to ensure a continuum of community-based ideas, evaluated against evolving regional needs. Essential to the development of a strategic project list will be analysis of equity impacts and sustainability benefits. Strategic projects do not require funding plans, but they will require statements about their overall benefits and future financial requirements. The SRTP will identify future programming capacity of anticipated resources within the SRTP timeline and beyond.







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## **Attachment B**

### **2020 LRTP Technical Document**





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# We have a plan for **OUR NEXT LA\***

2020 Long Range Transportation Plan  
TECHNICAL DOCUMENT



# Table of Contents

<b>Introduction</b>	<b>4</b>	<b>Tables and Charts</b>	
<b>Outreach Summary</b>	<b>6</b>	<i>Figure 1</i>	Public Outreach Process 7
<b>Priority Areas</b>	<b>14</b>	<i>Figure 2</i>	Large Employer Outreach 8
Better Transit	16	<i>Figure 4</i>	Outreach Events 12
Less Congestion	26	<i>Figure 5</i>	Existing Rail Network 17
Complete Streets	34	<i>Figure 6</i>	Transit Investment 18
Access to Opportunity	40	<i>Figure 7</i>	Better Transit Programs, Plans, and Policies 22
Sustainability	46	<i>Figure 8</i>	Highway Investment 27
Equity	52	<i>Figure 9</i>	Less Congestion Programs, Plans, and Policies 30
<b>Financial Model</b>	<b>54</b>	<i>Figure 10</i>	Active Transportation Investment 35
Major Revenue Assumptions	56	<i>Figure 11</i>	Complete Streets Programs, Plans, and Policies 36
Revenue Assumptions	64	<i>Figure 12</i>	Access to Opportunity Programs, Plans, and Policies 41
<b>Travel Demand Model and Assumptions</b>	<b>70</b>	<i>Figure 13</i>	Travel Demand Model Components 72
Metro Model Overview	71	<i>Figure 14</i>	Travel Demand Modeling Process 73
Alternatives Modeled	78	<i>Figure 15</i>	Metro Long Range Transportation Plan Base Year (2017) Model Flowchart 74
Model Inputs	82	<i>Figure 17</i>	Model Validation Data 76
Model Outputs	90	<i>Figure 18</i>	Expenditure Plan Transit Projects 78
Trip Distribution	94	<i>Figure 20</i>	Expenditure Plan Highway Projects 80
Scenario and Hybrid Testing	102	<i>Figure 22</i>	Highway Free Flow Speeds and Lane Capacities 82
<b>L RTP Performance Measures and Monitoring</b>	<b>108</b>	<i>Figure 24</i>	Summary of Highway Lane-Miles by Facility Type and Subregion in LA County 84
L RTP Systemwide Performance	109	<i>Figure 25</i>	Population Growth by County 87
Title VI Analysis	124	<i>Figure 26</i>	Population Growth by Subregion 87
Ongoing Monitoring	136	<i>Figure 27</i>	Employment Growth by County 89
<b>Subregional Profiles</b>	<b>140</b>	<i>Figure 28</i>	Employment Growth by Subregion 89
Arroyo Verdugo Cities	144	<i>Figure 29</i>	Total Daily Trip Production by County 91
Central Los Angeles	150	<i>Figure 30</i>	Total Daily Trip Production by Subregion 91
Gateway Cities	156	<i>Figure 31</i>	Total Daily Trip Attraction by County 93
Las Virgenes/Malibu	162	<i>Figure 32</i>	Total Daily Trip Attraction by Subregion 93
North Los Angeles County	168	<i>Figure 41</i>	Systemwide Daily Boarding Comparison by Mode 106
San Fernando Valley	174	<i>Figure 42</i>	Goal 1 Systemwide Performance Results 111
San Gabriel Valley	180	<i>Figure 43</i>	Goal 2 Systemwide Performance Results 113
South Bay Cities	186	<i>Figure 44</i>	Goal 3 Systemwide Performance Results 116
Westside Cities	192	<i>Figure 45</i>	Goal 4 Systemwide Performance Results 121
<b>Glossary</b>	<b>198</b>	<i>Figure 46</i>	Goal 5 Systemwide Performance Results 123
		<i>Figure 47</i>	Los Angeles County Ethnicity Based on 2017 ACS 124
		<i>Figure 48</i>	Los Angeles County Race Based on 2017 ACS 124
		<i>Figure 54</i>	Job Accessibility by Income Quintile 133
		<i>Figure 55</i>	Job Accessibility by Population Subgroup 134
		<i>Figure 56</i>	Mode Choice by Income Quintile 135
		<i>Figure 57</i>	Mode Choice by Population Subgroup 135
		<i>Figure 58</i>	Performance Measures and Data Source 137
		<i>Figure 61</i>	Arroyo Verdugo Projects and Multi-year Subregional Programs 146
		<i>Figure 66</i>	Arroyo Verdugo Summary Demographics 149

\*By LA, we mean all 88 cities, unincorporated areas and hundreds of neighborhoods, in LA County.

Figure 68	Central Los Angeles Projects and Multi-year Subregional Programs	152
Figure 73	Central Los Angeles Summary Demographics	155
Figure 75	Gateway Cities Projects and Multi-year Subregional Programs	158
Figure 80	Gateway Cities Summary Demographics	161
Figure 82	Las Virgenes/Malibu Projects and Multi-year Subregional Programs	164
Figure 87	Las Virgenes/Malibu Summary Demographics	167
Figure 89	North Los Angeles County Projects and Multi-year Subregional Programs	170
Figure 94	North Los Angeles County Summary Demographics	173
Figure 96	San Fernando Valley Projects and Multi-year Subregional Programs	176
Figure 101	San Fernando Valley Summary Demographics	179
Figure 103	San Gabriel Valley Projects and Multi-year Subregional Programs	182
Figure 108	San Gabriel Valley Summary Demographics	185
Figure 110	South Bay Cities Projects and Multi-year Subregional Programs	188
Figure 115	South Bay Cities Summary Demographics	191
Figure 117	Westside Cities Projects and Multi-year Subregional Programs	194
Figure 122	Westside Cities Summary Demographics	197

Figure 64	ARROYO VERDUGO POPULATION DENSITY	148
Figure 65	ARROYO VERDUGO LAND USE	148
Figure 67	CENTRAL LOS ANGELES	151
Figure 69	CENTRAL LOS ANGELES DAILY TRIPS	153
Figure 70	CENTRAL LOS ANGELES EMPLOYMENT DENSITY	153
Figure 71	CENTRAL LOS ANGELES POPULATION DENSITY	154
Figure 72	CENTRAL LOS ANGELES LAND USE	154
Figure 74	GATEWAY CITIES	157
Figure 76	GATEWAY CITIES DAILY TRIPS	159
Figure 77	GATEWAY CITIES EMPLOYMENT DENSITY	159
Figure 78	GATEWAY CITIES POPULATION DENSITY	160
Figure 79	GATEWAY CITIES LAND USE	160
Figure 81	LAS VIRGENES/MALIBU	163
Figure 83	LAS VIRGENES/MALIBU DAILY TRIPS	165
Figure 84	LAS VIRGENES/MALIBU EMPLOYMENT DENSITY	165
Figure 85	LAS VIRGENES/MALIBU POPULATION DENSITY	166
Figure 86	LAS VIRGENES/MALIBU LAND USE	166
Figure 88	NORTH LOS ANGELES COUNTY	169
Figure 90	NORTH LOS ANGELES COUNTY DAILY TRIPS	171
Figure 91	NORTH LOS ANGELES COUNTY EMPLOYMENT DENSITY	171
Figure 92	NORTH LOS ANGELES COUNTY POPULATION DENSITY	172
Figure 93	NORTH LOS ANGELES COUNTY LAND USE	172
Figure 95	SAN FERNANDO VALLEY	175
Figure 97	SAN FERNANDO VALLEY DAILY TRIPS	177
Figure 98	SAN FERNANDO VALLEY EMPLOYMENT DENSITY	177
Figure 99	SAN FERNANDO VALLEY POPULATION DENSITY	178
Figure 100	SAN FERNANDO VALLEY LAND USE	178
Figure 102	SAN GABRIEL VALLEY	181
Figure 104	SAN GABRIEL VALLEY DAILY TRIPS	183
Figure 105	SAN GABRIEL VALLEY EMPLOYMENT DENSITY	183
Figure 106	SAN GABRIEL VALLEY POPULATION DENSITY	184
Figure 107	SAN GABRIEL VALLEY LAND USE	184
Figure 109	SOUTH BAY CITIES	187
Figure 111	SOUTH BAY CITIES DAILY TRIPS	189
Figure 112	SOUTH BAY CITIES EMPLOYMENT DENSITY	189
Figure 113	SOUTH BAY CITIES POPULATION DENSITY	190
Figure 114	SOUTH BAY CITIES LAND USE	190
Figure 116	WESTSIDE CITIES	193
Figure 118	WESTSIDE CITIES DAILY TRIPS	195
Figure 119	WESTSIDE CITIES EMPLOYMENT DENSITY	195
Figure 120	WESTSIDE CITIES POPULATION DENSITY	196
Figure 121	WESTSIDE CITIES LAND USE	196

## Maps

Figure 3	L RTP COMMUNITY OUTREACH	10
Figure 16	TRAVEL DEMAND MODEL AREA	75
Figure 19	2020 PLAN TRANSIT PROJECTS MAP	79
Figure 21	2020 PLAN HIGHWAY PROJECTS MAP	81
Figure 23	METRO 2017 HIGHWAY NETWORK	83
Figure 33	PEAK PERIOD HOME-TO-WORK TRIP PRODUCTIONS BY SUBREGION, 2017	95
Figure 34	PEAK PERIOD HOME-TO-WORK TRIP PRODUCTIONS BY SUBREGION, 2047	95
Figure 35	PEAK PERIOD HOME-TO-WORK TRIP ATTRACTIONS BY SUBREGION, 2017	97
Figure 36	PEAK PERIOD HOME-TO-WORK ATTRACTIONS BY SUBREGION, 2047	97
Figure 37	DAILY TRIP PRODUCTIONS BY SUBREGION, 2017	99
Figure 38	DAILY TRIP PRODUCTIONS BY SUBREGION, 2047	99
Figure 39	DAILY TRIP ATTRACTIONS BY SUBREGION, 2017	101
Figure 40	DAILY TRIP ATTRACTIONS BY SUBREGION, 2047	101
Figure 49	2017 ACS MEDIAN ZONAL INCOME IN QUINTILES	127
Figure 50	TRANSIT-DEPENDENT POPULATION	129
Figure 51	AFRICAN AMERICAN POPULATION	130
Figure 52	HISPANIC OR LATINO POPULATION	131
Figure 53	ASIAN/PACIFIC ISLANDER POPULATION	132
Figure 59	LOS ANGELES COUNTY SUBREGIONS	143
Figure 60	ARROYO VERDUGO SUBREGION	145
Figure 62	ARROYO VERDUGO DAILY TRIPS	147
Figure 63	ARROYO VERDUGO EMPLOYMENT DENSITY	147

# Introduction

The 2020 Long Range Transportation Plan Technical Document (Technical Document) is a companion document to the Los Angeles County Metropolitan Transportation Authority's 2020 Long Range Transportation Plan (LRTP). This technical document provides additional information regarding various technical components of the LRTP, including outreach efforts, priority areas, capital projects and programs, sustainability, equity, financial modeling and assumptions, travel demand modeling and assumptions, performance analysis, and sub-regional profiles. For more information on LRTP recommendations, please refer to the LRTP, available under separate cover.

## LRTP Overview

As the state-designated transportation planning and programming agency for LA County, Metro is required to adopt and maintain an LRTP to satisfy federal and state funding requirements (per enabling legislation California Public Utilities Code §130050 et seq). Metro develops a LRTP for LA County. The LRTP is periodically updated to maintain at least a 20-year planning horizon, and to reflect changes since the last Plan was adopted. The 2020 LRTP extends the planning horizon from the 2009 LRTP by an additional seven years, from 2040 to 2047. It also updates the LRTP for a variety of factors, such as socio-economic data, financial conditions, changes in travel patterns, and the inclusion of additional projects and programs. The LRTP is a living document which can be amended through Board action as regional needs and priorities change.

## LRTP Development

In developing the LRTP, Metro coordinated with a wide range of partners representing a variety of interests. Metro conducted community outreach meetings for the LRTP at locations throughout the County, and provided an opportunity for public review through a 45-day comment period (see Chapter 2 for more details). Metro also coordinated with its transportation partners, including the sub-regional agencies, the Southern California Association of Government (SCAG), Caltrans, Metrolink, and municipal and local transit operators. Finally, the LRTP benefited from regular consultation with the Metro Policy Advisory Council (PAC).

While the development of this LRTP occurred primarily over the past year, it is built on a multi-year process to engage community members and stakeholders. In 2013, the Metro Board directed that a holistic countywide "Mobility Matrices" approach be developed to assess the county's transportation needs. In February 2014, the Board approved the approach whereby subregional working groups would develop goals for analyzing unmet county transportation needs. The process ultimately resulted in a project list that met the expected revenue generated by the tax measure, and more importantly, it emerged as a plan from the people for the people. In November 2016, Measure M made history when 71.15 percent of LA County voters approved the ballot measure to fund an array of transportation projects and programs. The result was a half-cent sales tax with a no sunset provision and the indefinite extension of the existing half cent tax (Measure R) set to expire in 2039.

Together, Measures M and R provide LA County with a 40-year capital expansion program described in Section 4 of this document. However, the LRTP provides a 30-year vision for Metro to move beyond the capital program and develop bold policies and programs to transform mobility in LA County.

# Document Contents

This technical document builds upon the LRTP by providing extended content in several topic areas with the following sections:

## **Outreach Summary**

This chapter highlights the processes involved in public outreach and stakeholder engagement as a part of the LRTP.

## **Priority Areas**

This chapter organizes Metro's projects and programs into the LRTP's four priority areas (Better Transit, Less Congestion, Complete Streets, Access to Opportunity) and takes a deep dive into Metro's sustainability and equity programs.

## **Financial Model and Assumptions**

This chapter describes the financial model and analysis that supports the LRTP.

## **Travel Demand Model and Assumptions**

This chapter describes the travel demand model and assumptions used to assess the performance of the LRTP.

## **Performance Measures**

This chapter summarizes transportation system performance in LA County with the improvements recommended in this LRTP.

## **Subregional Profiles**

This chapter describes each of Metro's nine subregions, their transportation facilities, land use, demographics, and major projects and programs.



# Outreach Summary

Public engagement and stakeholder outreach are an integral part of the Long Range Transportation Plan (LRTP) update. It is done to guarantee that Metro is inclusive and responsive to its constituents, while ensuring responsible and transparent stewardship of public funds. The LRTP's Public Participation Plan Framework, which was presented to the Board in November 2017, outlined key principles, goals, and established a timeline for up to three rounds of engagement activities. Engagement activities took place across all of the nine LA County subregions.

This outreach effort was named “Our Next LA\*” which is meant to illustrate that Metro values collaboration with our partners and constituents. The understanding of ‘LA’ in this case is that it is a diverse collection of distinct neighborhoods and cities throughout the County of Los Angeles that Metro serves. The outreach was guided by and centered in Metro’s Equity Platform which calls on Metro to ‘Listen and Learn’ as one of its four pillars.

The engagement process can broadly be defined by three distinct steps. The first round, named Baseline Understanding, was an open listening session meant to learn how stakeholders move through the county, what hurdles they might encounter, and how they think Metro might best solve transportation challenges in the county. The second round, the Values Framework, asked participants to rank the five priorities Metro heard most often in the first round of outreach. The last round is the culmination of the previous rounds of outreach and resulted in the release of the Draft LRTP Update to the public. The LRTP reflects all of the voices we heard throughout the outreach process and how Metro is addressing the public’s concerns.

Figure 1

## Public Outreach Process

Phase 1	Baseline Understanding – Opening Listening	Summer 2018
Phase 2	Values Framework – Respond to What We Hear	Winter 2019
Phase 3	Draft LRTP – Public Review	Summer 2020

# Phase 1 – Baseline Understanding

The first phase, named Baseline Understanding, was an open listening session meant to learn how people move through the county, what hurdles they encounter, and how they think Metro might best solve transportation challenges in the county. This initial round of outreach began in June 2018 where Metro used surveys, interviews, and pre-printed Post-It notes to ask the participants at public events what their visions or priorities were for the future of their community. Metro attended more than 52 community events, including health fairs, cultural events, open streets events, farmers markets, back to school giveaways, food fairs and more.

Phase 1 of outreach included the following strategies:

- > **Surveys** – The surveys collected information related to participant’s travel preferences, including usage of public transportation, and general interest in transportation options within LA County. The collection methods described were purposefully open-ended in order to collect the concerns of the public without having them feel limited by multiple choice options. Participants were also encouraged to complete post-it forms that asked the one thing they wanted realized for their future communities.
- > **In-Depth Interviews** – Beyond collecting surveys from participants, Metro also conducted more in-depth interviews with select and willing participants to further probe their thoughts and travel behavior. These interviews supplemented the surveys Metro collected and increased opportunities for Metro listening to unfiltered ideas in detail.
- > **Targeted Employer Outreach** – Metro also made in-roads with large employers throughout LA County. These employers ran the gamut of fields, including universities, healthcare, technology, and industrial companies. In total, Metro made contact with 31 employers, with a workforce of approximately 400,000 employees within LA County. Figure 2 is a sample of employers contacted, with estimated numbers for their workforce.
- > **Advisory Groups** – Metro also made presentations to various councils and committees within the agency, including the Metro’s Citizens Advisory Council (CAC), the Technical Advisory Committee (TAC), and the Policy Advisory Council (PAC), to ensure our diverse stakeholders had the opportunity to discuss their issues and ideas

regarding this engagement process. The PAC was established in 2017 to help guide the development of the LRTP, as well as Measure M guidelines. In order to be balanced and broadly representative, the PAC consists of local jurisdictions with all nine Councils of Government (and/or subregions), local transportation providers and agency partners, as well as transportation consumer groups, including community-based organizations and advocates.

Through all channels of outreach, participants were invited to visit the *OurNext.LA* website to learn more about the process and to sign up to receive information regarding the upcoming outreach rounds and, ultimately, the release of the LRTP.

As a result of the outreach in Phase 1, Metro attended more than 50 events, gathered over 20,000 surveys, and spoke to over 40 partners. These events, surveys, and partners were spread throughout the county, to capture the needs from geographic and socioeconomically diverse regions within the county.

Figure 2

## Large Employer Outreach

EMPLOYER	NUMBER OF EMPLOYEES
County of Los Angeles	107,400
University of California, Los Angeles	65,600
City of Los Angeles	61,900
Kaiser Permanente	37,400
University of Southern California	21,000
Northrop Grumman Corp.	16,600
Cedars-Sinai Medical Center	14,900
Los Angeles Community College District	13,200
Walt Disney Co.	13,000
NBCUniversal	12,000
California State University, Long Beach	8,800
California Institute of Technology	8,700
Children’s Hospital Los Angeles	5,700
Compton Unified School District	3,600
Pasadena Area Community College District	3,500
City of Santa Monica	3,000
Montebello Unified School District	1,900



**MY NEXT**  
Whittier \*\*  
is PUBLIC TRANSIT FRIENDLY

**MY NEXT**  
Sierra Madre \*\*  
is more transit!

**MI PRÓXIMO**  
Panorama City \*\*  
es más bicicletas

**MY NEXT**  
South Gate \*\*  
is bike friendly

**MY NEXT**  
Hacienda Heights \*\*  
is less traffic!

**MY NEXT**  
Koreatown \*\*  
is more housing!

**MY NEXT**  
Stevenson Ranch \*\*  
More aid for  
is homeless

**MY NEXT**  
Norwalk \*\*  
is Pro small business



# Phase 2 – Values Framework

The second Phase, the Values Framework, began in January 2019 alongside the NextGen Bus Study workshops held throughout LA County. Metro asked participants to rank the five priorities Metro heard most often in the first phase of outreach—those being better transit, less congestion, more innovation, more affordable and inclusive, and safer more complete streets.

As in the prior phase of outreach, online presence continued to be a key component. In this round, Metro launched a Facebook and Instagram advertisement campaign, and utilized the preexisting Metro Twitter account to direct and encourage the public to rank their priorities through an online tool, available in English and Spanish. Other forms of advertisement for this round included small, neighborhood billboards and car cards, which are posters placed in Metro buses.

To elicit more input, Metro reached out to some of the first round's large employers, jurisdictions, municipal operators, and others to ask them to share the ranking exercise, as well as reached out to the faithbased community.

During this second phase, Metro attended approximately twenty-five events, attended twenty-eight public meetings, gathered over 48,000 priority rankings and spoke to 200 Community Based Organizations across all nine subregions.

Figure 3

## LRTP COMMUNITY OUTREACH



Outreach locations include Phase 1 and Phase 2.



# Phase 3 – Draft LRTP

In the third phase, we released the completed the Draft LRTP for public comment. The Draft LRTP was developed to reflect input gathered throughout the entire process. We asked for community input on the draft plan via several avenues:

- > Telephone Town Hall
- > Webinar
- > Social Media Posts
- > *OurNext.LA* Website
- > *Metro.net* Website
- > Emails
- > Postcards

As a result, the LRTP received more than 130,000 visits to *OurNext.LA* during the draft public comment period from stakeholders reviewing plan details. Metro also received 188 comments on the draft LRTP. With this robust feedback, the final LRTP was able to better reflect the needs and priorities of Metro’s communities.

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Figure 4

## Outreach Tactics

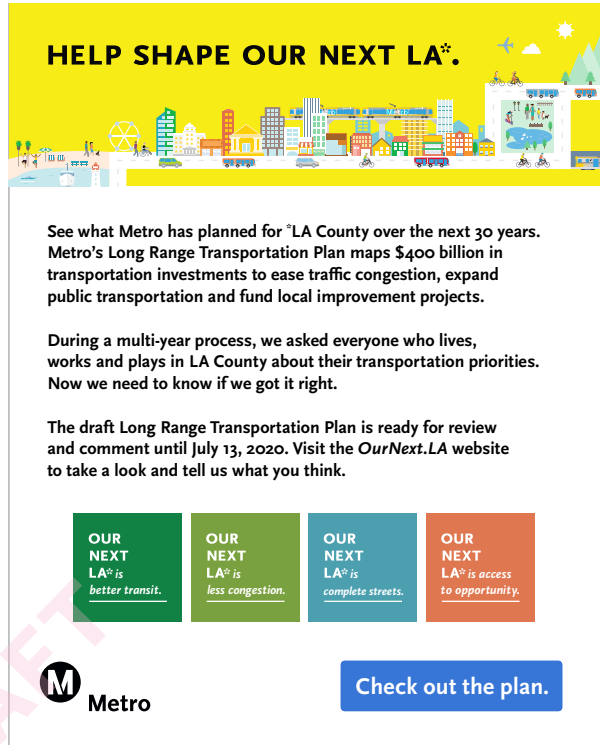
	PHASE 1	PHASE 2	PHASE 3	TOTAL
Public events	52	25	2*	79
Public meetings	10	28	13*	51
Surveys	20,645			20,645
Priority Rankings		48,759		48,759
Partners (inc. large employers)	41	18		59
Emails		16,200	2,448,430	2,464,630
Postcards			23,521	23,521
Media impressions **		6,540,080	15,255,546	21,795,626
<i>OurNext.LA</i> website visits		41,935	134,197	176,132

\* Virtual or online event

\*\* Media includes advertising and social media



Rail Poster



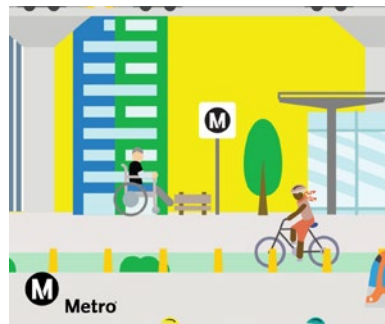
E-Blast



Postcard Front



Postcard Back



Animated Digital Ad



# Priority Areas

The LRTP public outreach process resulted in the region's desires being distilled into four priority areas:

- > Better Transit
- > Less Congestion
- > Complete Streets
- > Access to Opportunity

Metro's expansive programs, policies, and partnerships fit into these four areas, guiding Metro towards a vision of the future that reflects the communities we serve. Better Transit projects and programs aim to expand transportation options and improve service. Less Congestion encompasses programs and highway projects that reduce or are expected to reduce the time people spend in traffic. Programs and projects to maintain and improve upon street safety for all users and convenience fall under the Complete Streets Priority. Access to Opportunity includes Metro's efforts to invest in communities to create jobs and housing near transit.

The LRTP identifies key strategies and actions under each of these four priority areas. For each action, the LRTP indicates whether the action is occurring now (ongoing), soon (in the next 5-10 years), or in the future (more than 10 years) and the goal area (build, manage, maintain, partner). While the LRTP embeds Metro's projects and programs into key strategies and actions, the following section expands on Metro's strategies and actions through a robust overview of our key projects, programs, plans, and policies. Although sustainability and equity are woven throughout the four priority area sections, this chapter also takes a deeper dive into Metro's sustainability and equity programs.

## Better Transit



## Less Congestion



## Complete Streets



## Access to Opportunity



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# Better Transit

**Better transit means faster, more frequent, secure and reliable public transportation, with more options and better customer experience. Since 1990, the Metro Rail system has become one of the largest urban rail systems in the United States. Metro operates a light and heavy rail system that provides more than 101.5 miles of revenue service track and 104 rail stations. Today, the Metro Rail system moves nearly 310,000 passengers each weekday. Figure 5 summarizes the existing rail lines and transitways and FY 2019 boardings.**

Metro also operates a bus fleet of 2,308 vehicles that cover more than 1,479 square miles of service area. The estimated weekday ridership was nearly 870,000 in FY2019. Metro's existing bus network consists of the following route types:

- > **Metro Local (100-299)** – buses stop on average every two blocks.
- > **Metro Limited (300-399)** – modified local buses with wider stop spacing- that mostly operate during weekdays to supplement local service on major corridors that do not have Rapid service.
- > **Metro Express (400-500)** – travel routes on freeways for longer distances with fewer stops and have a higher premium (e.g., express routes between regional destinations and Downtown Los Angeles, Dodger Stadium Express from Union Station runs during selected special events , etc.)
- > **Metro Shuttles & Circulators (600-699)** – local shuttles and circulators connecting regional destinations (LAX, college and university campuses, medical facilities, etc.) to Metro rail stations or bus transfer hubs.

Figure 5  
Existing Rail Network

LINE NAME	OPEN YEAR	MILES (MIN)	STATIONS	ESTIMATED WEEKDAY RIDERSHIP (FY19)
A (Blue) Line*	1990	21.3	22	47,517
B (Red) Line	1993	16.4	14	
D (Purple) Line	2006	6.4	8	137,201
C (Green) Line	1995	19.5	14	30,218
E (Expo) Line	2012	15.2	19	61,590
L (Gold) Line	2003	29.7	27	51,289
All Bus				867,326
<b>TOTAL Weekday Ridership</b>				<b>1,195,141</b>

\*Note: Because the southern half of the Blue Line Stations were closed in part of 2019, Blue Line estimates only account for the northern half of the line and are solely based on APC counts from the trains. All other rail line estimates are based on manual rail ride checks.

- > **Metro Rapid (700-799)** – faster buses featuring transit signal priority and with fewer stops, only at major intersections. LA Metro currently operates 20 Metro Rapid lines traversing all portions of LA County. This format for service is proposed to be merged with Metro Local service to provide a single very high frequency transit service on major corridors, to better balance speed and accessibility for more competitive overall travel times. The only exceptions are three corridors (Wilshire, Vermont, Van Nuys-Westside) with very high demand where Rapid service will be maintained pending the opening of planned or under construction rail or Bus Rapid Transit service.
- > **Metro Busways** – bus rapid transit lines (BRT) that run on dedicated busways (e.g., Metro G [Orange] and J [Silver] lines).

In addition to Metro’s local bus operations, transit services in LA County are provided by 26 municipal operators. These operators provide services countywide outside the urban core and are an integral part of LA County’s transit network. The non-Metro operators collectively manage a fleet of more than 1,911 vehicles. Metro and the County’s municipal operators carried 273 million boardings annually in FY19.

Metro is continuing construction of the largest public works program in America by focusing on rail projects which will expand and extend the existing rail network alongside new Bus Rapid Transit (BRT) projects that will focus on congested corridors. The 2020 LRTP will expand the Metro Rail network from 104 rail stations to over 200 stations covering nearly 240 miles. Investments in transit over the next 30 years include the construction or improvement of 22 transit corridors and the addition of 106 miles of fixed guideway transit.

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# Transit Investment

Funded by Measure M and Measure R, the transit investments at Metro are listed in Figure 6.

Figure 6

## Transit Investment

TRANSIT PROJECT	\$ IN MILLIONS	OPEN YEAR	DESCRIPTION
Crenshaw/LAX Transit Project (LRT)	2,058	2021	The Crenshaw/LAX Transit Project, currently in construction, will extend from the existing E Line (Expo) at Crenshaw 8.5 miles southwest to the C Line (Green). With opening expected in 2021, the Crenshaw Line will add eight new stations, including one at the Automated People Mover currently under construction at the Los Angeles International Airport (LAX).
Regional Connector Transit Project (LRT)	1,756	2022	This project will allow passengers to transfer between the A (Blue), E (Expo), B (Red) and D (Purple) Lines, bypassing the need to change trains at Union Station.
D Line (Purple) Extension (HRT)			The Purple Line Extension will provide a high-capacity, high-speed alternative for commuters to travel between downtown Los Angeles and the Westside beyond the existing terminus at Wilshire/Western. The project is divided into three sections.
Section 1 (Wilshire/Western to Wilshire/La Cienega)	2,779	2023	Section 1 will add three new stations and 3.92 miles of new rail to Metro's Rail system. The three new stations will be located at Wilshire/La Brea, Wilshire/Fairfax, and Wilshire/La Cienega. The project will extend the current Purple Line from Koreatown through Miracle Mile.
Section 2 (Wilshire/La Cienega to Century City/Constellation)	2,441	2026	Section 2 includes 2.59 miles of additional tracks to Metro's Rail system and two new stations at Wilshire/Rodeo and Century City/Constellation. Construction for Section 2 began in 2018. The extension will continue the Purple Line from Miracle Mile through Beverly Hills and into Century City.
Section 3 (Century City/Constellation to Westwood/VA Hospital)	3,224	2027	Section 3 will add 2.56 miles of new rail to Metro's Rail system. The two new stations will be added at Wilshire/Westwood and on the U.S. Department of Veterans Affairs property. The project began construction in 2019 and is anticipated to open for operations in 2027.
Airport Metro Connector/g6th Street Station/Green Line Ext LAX	626	2024	The Airport Metro Connector will provide a connection along the Crenshaw/LAX Line to a future Automated People Mover (APM) to be built and operated by Los Angeles World Airports (LAWA). This will serve as a transit "Gateway" to LAX. The AMC Transit Station is envisioned to include the following basic components: three at-grade LRT platforms to be served by the Crenshaw/LAX Line and an extension of the Metro Green Line, a bus plaza and terminal facility for Metro and municipal bus operators, a bicycle hub with secured parking, a pedestrian plaza, a passenger vehicle pick-up and drop-off area, and a Metro transit center/terminal building ("Metro Hub") that connects passengers between the various modes of transportation.

L RTP project costs may not match Measure M expenditure plan due to year of expenditure escalation and prior spending. Final mode, alignments, and station locations to be confirmed during environmental processes. Estimated open year is a three-year range.

\*Includes projects through 2057, the horizon year of Measure M

TRANSIT PROJECT	\$ IN MILLIONS	OPEN YEAR	DESCRIPTION
North San Fernando Valley Transit Corridor (BRT)	207	2025	The North San Fernando Valley (NSFV) project is a proposed new 18-mile BRT line that would enhance existing bus service and increase transit system connectivity. The project will travel primarily east-west across the northern San Fernando Valley, potentially connecting to the East San Fernando Valley Transit Corridor Project, the Chatsworth Metrolink Station, and the North Hollywood Metro G/B (Orange/Red) Line Station.
G Line (Orange) Improvements	314	2025	The nearly 18-mile long Metro Orange Line (MOL) Bus Rapid Transit (BRT) Improvements Project includes building up to 35 railroad-style gates at intersections along the Orange Line and constructing grade separated structures at Van Nuys and Sepulveda Blvds. The project seeks to improve bus speeds, safety, and provide a critical link in the transportation network Metro is building to transform the San Fernando Valley and improve regional mobility.
North Hollywood to Pasadena Transit Corridor (BRT)	315	2026	The North Hollywood (NoHo) to Pasadena BRT Corridor extends approximately 16 to 18 miles from the North Hollywood Metro Red/Orange Line Station to Pasadena City College. The project aims to build a high-quality bus rapid transit (BRT) line that will connect the San Fernando and San Gabriel Valleys. It will traverse the communities of North Hollywood and Eagle Rock in the City of Los Angeles, as well as the Cities of Burbank, Glendale, and Pasadena. Current plans estimate 21 to 23 potential stations along the corridor.
East San Fernando Valley Light Rail Project (LRT)	1,568	2027	A 9.2 mile high-capacity transit project with 14 stations connecting the Orange Line Van Nuys stations to the Sylmar/San Fernando Metrolink Station. This project is in the design phase.
Gold Line Foothill Extension to Claremont (LRT)	1,571	2028	This project will extend the existing Gold Line to Claremont, providing a 45 or 75 minute ride to Pasadena or Los Angeles, respectively. This project will serve many regional destinations as well as regional parks and two dozen colleges and universities. The project is in the design-build construction phase.
Vermont Transit Corridor	524	2028	Adds a 12.5-mile high capacity transit corridor from Hollywood Blvd to 120th St. Measure M includes a provision for a potential future conversion to rail based on ridership demand.
Antelope Valley Line Capacity and Service Improvements Program	221	2028	Builds four rail infrastructure improvement projects (Balboa Double track extension, Brighton to McGinley Double track, Canyon to Santa Clarita Double track and Lancaster terminal improvements) on the Antelope Valley Line that would enable hourly service to Palmdale and Lancaster and 30 minute bi-directional service to Santa Clarita.
West Santa Ana Branch Transit Corridor (LRT)	1,250	2028	The Project will consist of 12 stations and is a 19-mile corridor that will connect southeast LA County to downtown Los Angeles, serving the cities and communities of Artesia, Cerritos, Bellflower, Paramount, Downey, South Gate, Cudahy, Bell, Huntington Park, Vernon, unincorporated Florence-Graham community of LA County and downtown Los Angeles.
	5,061	2041	
C Line (Green) Extension to Torrance	1,167	2030	Extension of the light rail line from its current terminus at the Redondo Beach Station to the Torrance Transit Center at Crenshaw Blvd. Consisting of up to 2 stations and 4.7 miles, the project is under reinitiated environmental phase.

TRANSIT PROJECT	\$ IN MILLIONS	OPEN YEAR	DESCRIPTION
Sepulveda Transit Corridor (Mode TBD)			The Sepulveda Transit Corridor is described in two phases, with high-capacity transit service between the San Fernando Valley and the Westside in FY2033 and an extension to LAX in FY2057. The Valley-Westside portion of the project is identified for potential acceleration in time for the 2028 Olympic and Paralympic Games in Los Angeles (LA 2028).
Phase 2 – Valley to Westside	7,685	2033	
Phase 3 – Westside to LAX	10,587	2057*	
Eastside Extension Phase 2 Transit Corridor (1st Alignment) <sup>1</sup>	4,409	2035	Extension of the Gold Line Eastside light rail corridor beginning at the existing L (Gold) Line Atlantic Station eastward.
Crenshaw Northern Extension (LRT)	4,744	2047	This project extends the future Crenshaw Line Rail north from the Expo/Crenshaw Station to Hollywood at the B (Red) Line Rail Hollywood/Highland Station.
Lincoln Bl (BRT)	220	2047	The Lincoln Boulevard BRT links the Airport Metro Connector to the E Line (Expo). The project could be converted to rail service at a later date if ridership demand outgrows the bus rapid service capacity.
SF Valley Transportation Improvements	257	2050	Improvements may include, but are not limited to, Transit Improvements, and I-210 soundwalls in Tujunga, Sunland, Shadow Hills and Lakeview Terrace.
C Line (Green) Eastern Extension (Norwalk) (LRT)	1,891	2052*	Extends the C Line (Green) 2.8 miles from Norwalk to the Norwalk/Santa Fe Springs Metrolink Station.
G Line (Orange) Conversion to Light Rail	4,069	2057*	The G Line conversion of the 18-mile bus rapid transit line to light-rail service.
Historic Downtown Streetcar	581	2057*	Builds a 3.8-mile streetcar along existing traffic lanes from 1st St to 11th St in downtown Los Angeles.
Eastside Extension Phase 2 Transit Corridor (2nd Alignment) <sup>1</sup>	8,707	2057*	Extension of the Gold Line Eastside light rail corridor beginning at the existing L (Gold) Line Atlantic Station eastward.

L RTP project costs may not match Measure M expenditure plan due to year of expenditure escalation and prior spending. Final mode, alignments, and station locations to be confirmed during environmental processes. Estimated open year is a three-year range.

<sup>1</sup>Metro Board approved a separate feasibility study to be completed along SR-60 to identify potential mobility solutions and options in the short and long-term for the San Gabriel Valley.

\*Includes projects through 2057, the horizon year of Measure M

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# Better Transit Programs, Plans, and Policies

Beyond the physical expansion and upgrades to transit corridors, Metro continues improving transit through programs, plans, and policies. Better Transit actions include plans for the future bus and BRT system, new mobility programs, and Metro’s efforts to provide services that make transit more accessible to customers who face added barriers, such as people in need of paratransit services and women riders. Metro’s transit programs, plans, and policies are shown in Figure 7.

Figure 7

## Better Transit Programs, Plans, and Policies

TRANSIT PROJECT	DESCRIPTION
Bus Rapid Transit Vision & Principles Study	This study will define standards for future Metro (and Metro funded) BRT projects. Along with the design criteria/guidelines, the BRT standards will assist and guide Metro and other municipal transit operators with the planning, design, and monitoring of an efficient and effective BRT system that helps support the creation of a world class bus system in LA County.
NextGen Bus Plan	In 2018, Metro began the process of reimagining our bus system to better meet the needs of current and future riders. The proposed plan improvements would double the number of frequent Metro bus lines; provide more than 80% of current bus riders with 15-minute or better frequency; create an all-day, every day service; ensure a one quarter-mile walk to a bus stop for 99% of current riders; and create a more comfortable and safer waiting environment. The “Transit First” approach would include capital projects that speed up buses (bus lanes and traffic signal priority, etc.), make bus stops more comfortable, expand all-door boarding and add even more frequent services, among other improvements. NextGen will be rolled out in coordination with the upcoming Metro Micro service, which will pilot an on-demand format for service, utilizing on-demand vans equipped with bicycle racks, to maintain and expand service coverage for existing and potential new riders in areas where there is lower-usage or nonexistent fixed route bus service today.
City-Run Transit Circulators (Local Return Program)	Local Return is the city’s share of the various transportation sales taxes. Proposition A, approved by voters in 1980, provides a 25% local return share of the fund to benefit public transit. Proposition C, approved in 1990, expanded the definition to provide for in-direct transit uses with a share of 20%. Measure R was approved in 2008 with a share of 15% and expands the definition even further to include public transportation uses. Measure M was approved in 2016 and provides a 17% share.
Complementary Paratransit (Access Services)	Access Services, a local public entity, is the Los Angeles County Consolidated Transportation Services Agency (“CTSA”) and administers the Los Angeles County Coordinated Paratransit Plan on behalf of the County’s 45 public fixed route operators (i.e., bus and rail). As required by applicable regulations, Access Paratransit service is available for any ADA paratransit eligible individual for any purpose to or from any location within ¾ of a mile of any fixed route bus operated by the LA County public fixed route bus operators and within ¾ of a mile around Metro Rail stations during the hours that the systems are operational.
Call for Projects	The Call for Project (CFP) process is a competitive grant program that co-funds new regionally significant capital projects. Various discretionary federal, state, and local transportation funds have been awarded by Metro to the most competitive projects through the CFP process. The process is typically held biennially in odd-numbered years, when funding is available. As funding needs are addressed throughout LA County, Metro will revisit the CFP process to determine financial feasibility and resources required to implement any future rounds.

TRANSIT PROJECT	DESCRIPTION
Regional Rail	Regional Rail plans, programs and implements certain commuter and intercity rail capital improvement projects along the Metro owned railroad right of way with partner agencies. Metro owns approximately 150 route miles of Class 1 commuter rail right-of-way with 152 at-grade crossings in LA County spanning up to Lancaster in the north, Chatsworth in the west and Claremont in the east. Regional Rail advances projects that improve regional mobility in LA County including modernizing Los Angeles Union Station to transform it into a World Class transit and mobility hub.
Transit Security and Law Enforcement	In March of 2017, Metro Transit Security entered into a five-year contract with three police agencies to further support security on bus and rail lines across Metro's transit system. That same year, Metro launched the use of a multi-agency approach to patrol LA County's 88 cities. This new policing structure includes the Los Angeles County Sheriff's Department, Los Angeles City Police Department, and Long Beach Police Department.
Security Certification	As part of a continuing effort to build system-wide resiliency, Metro will be adopting the FTA's Security Certification Management Guidance (FTA C 5800.1) to ensure preparedness for all hazards, meeting 21st century threats, unique to transit systems. An enhanced security design criteria program will also be advanced to provide agency-wide guidance on best practices related to security protective measures. Collectively, these efforts will buy down risk and increase the ability of Metro to provide uninterrupted service to the community.
Emergency Security Operations Center (ESOC)	As the heart of transit-centered emergency management and coordination for the Southern California Region, this collaborative and interactive facility, replete with centralized security technologies will support 24 hour situational awareness and total enterprise security to detect, deter, delay and deny serious risks to the agency while providing daily security operation management of all Metro security functions. Supported by the Metro Security & Emergency Preparedness Plan (SEPP), Threat Vulnerability Assessments, Continuity of Operations Plans, this facility is the culmination of federal, state and local guidance to best prepare the Agency for the decade of large-scale events (i.e. Super Bowls, 2028 Olympics, etc.)
Homeless Task Force	In spring 2016, at the direction of our CEO, Metro created a Homeless Task Force to address homelessness in and around the transit system and align action with County and City of Los Angeles priorities. In February 2017, the Homeless Action Plan was finalized. The Action Plan's goals are threefold: 1. to enhance the customer experience; 2. maintain a safe and secure system; and, 3. connect homeless persons in the transit system to services and resources under Measures H and HHH.
Transit Watch App	Metro utilizes a Transit Watch mobile application, which provides an easy way to report incidents on our trains or buses. The app allows the patron to report incidents and photos to the security dispatcher, allows for push notifications to all users, and in the future will provide a Spanish language option, GPS locating, and video uploads. If they choose, app users can remain anonymous when sending messages or filing a report. The new, Metro-developed app has the ability to push upgrades to our users seamlessly.
Metro Call Point	In response to the need for a consistent standard for communications equipment, Metro has developed a design solution 'Metro Call Point' units. The Call Point unit is intended to replace all existing, customer-facing P-TELEs, E-TELEs, and G-TELEs. These units support station safety and security, as well as passenger experience. The units will provide both information and emergency communication capability within public areas of the station, parking structures and plaza area for all Metro rail and BRT stations. A Call Point unit shall be placed adjacent to the Ticket Vending Machines (TVMs).

TRANSIT PROJECT	DESCRIPTION
Sexual Harassment Prevention	<p>In 2017, Metro partnered with Peace Over Violence to provide a 24/7 sexual harassment counseling hotline. The hotline, 1-844-Off-Limits (633-5464), is staffed by counselors with extensive experience counseling victims of sexual abuse in LA County. Metro has installed a video-based monitoring system in the operating cabs of each rail car. Metro uses this video-based system to supplement the random monitoring and enforcement of its operating rules, including rules and policies governing the use of electronic devices. Victims of sexual harassment will make contact with officers via LA Metro Dispatch or in person. Metro's Dispatch may be accessed through the Metro Transit Watch App.</p>
SCORE Program	<p>Metrolink's Southern California Optimized Rail Expansion (SCORE) program is an ambitious capital program that will upgrade Metrolink's system in time for the 2028 Olympic and Paralympic Games. LA Metro is a partner in this Southern California Regional Rail Authority Program. Metrolink is operated by the Southern California Regional Rail Authority (SCRRA) and serves Los Angeles, Orange, Riverside, San Bernardino, Ventura and North San Diego counties. SCRRA, a joint powers authority made up of an 11-member board representing the transportation commissions of Los Angeles, Orange, Riverside, San Bernardino and Ventura counties, governs the service.</p>
TAP mobile app	<p>Metro is currently upgrading its regional fare collection system that serves all 26 TAP agencies, including Metro. Upgrades include near real-time fare availability and the ability to pay fare with the tap of a smart phone using the Apple Wallet. Live system testing of the app is currently being performed on fareboxes, station validators, gates and TVMs in preparation for a 2020 launch of the Apple Pay functions. The Android platform will follow thereafter.</p>
Supportive Transit Parking Program Master Plan	<p>The Supportive Transit Parking Program Master Plan is an analysis of the supply and demand for parking at LA Metro facilities that is designed to assist LA Metro, its parking team, and Metro riders. The Program aims to ensure parking resources for transit patrons using a fee based model to control parking demand.</p>
Mobility as a Service (MaaS) Platform	<p>The Mobility-as-a-Service (MaaS) solution, called TAPforce uses the Salesforce platform and will provide a unified payment system across Metro and cloud-based partner programs. It includes the ability for cloud-based mobility services to connect to TAP payment. Fare can be paid for these services through various payment methods including credit/debit cards and cash.</p>
Transfer Design Guide	<p>Almost two-thirds (64%) of Metro riders transfer at least once as part of their journey. The Metro Transfers Design Guide serves as a useful resource to a variety of audiences including Metro, local and regional transit providers, local jurisdictions, developers, and community groups by providing guidance on what riders need to quickly and easily make decisions, safely move between transit vehicles, and comfortably wait for their next bus or train.</p>
Metro Systemwide Station Design Standards Policy	<p>In order to continue building and maintaining a state-of-the-art transit system, the Metro Board of Directors has determined that all future Metro Rail and Bus Rapid Transit (BRT) station designs shall follow a consistent, integrated systemwide design approach, with integrated public art and sustainable landscaping as variable elements. In 2012, following a thorough review and evaluation of other leading state-of-the-art transit systems and international best practices for transit station design, Metro developed the Systemwide Station Design Standards, using a modular system, or "kit-of-parts". These Standards are continually refined and updated to help ensure Metro stations provide an ever-improving customer experience.</p>
Understanding How Women Travel Study	<p>Metro was the first transit agency in the nation to study and report on women's unique mobility needs. This 2019 report found that women take more Metro trips, ride public transit more often and prioritize safety more often than men.</p>

TRANSIT PROJECT	DESCRIPTION
Gender Action Plan	Following the How Women Travel Study, Metro plans to develop a Gender Action Plan, which will pivot from research findings to actionable changes, ensuring that the agency's policies, programs and activities include a gender perspective and promote the considerations of gender issues at all levels.
Accessible Wayfinding (NaviLens)	Metro is testing wayfinding strategies for the visually impaired so they can more easily navigate the transit system. This technology, NaviLens, allows users to access arrival and departure information and descriptions of how to get to different platforms at Union Station from a mobile application. The pilot deployment of NaviLens technology has allowed visually impaired riders to feel more comfortable traveling alone and improved the experience for passengers with disabilities.
Link Union Station (Link US)	Link US plans to transform Union Station into a modern, world-class transit and mobility hub, offering an improved passenger experience to meet the region's long-term transportation needs. As a part of the project, Metro is coordinating with the California High-Speed Rail Authority (CHSRA) to accommodate future high-speed rail (HSR) service at LAUS. Phase A of the Link Union Station project, expected to be complete in 2025, will transform Union Station from a "stub-end" station to a "run-through" station by constructing a new viaduct structure over the US-101 freeway that accommodates up to ten (10) run-through tracks. Phase A will enable the initial operation of two (2) run-through tracks that connects to the mainline tracks on the west bank of the LA River to the south, as well as the mainline tracks on the west bank to the north via a new northern loop track. Phase A will also include early track, rail signal and communication work to the throat north of the station, acquisition of properties along Commercial Street, and utility relocation and street improvement work south of US-101.
Mobility On Demand (MOD) Pilot	In October 2016, Metro was awarded \$1.35 million from FTA to partner with a transportation network company (TNC) and explore the viability and benefit of using TNC services to provide first/last mile solutions. Metro is partnering with NoMad Transit LLC to provide first/last mile shared rides for trips originating and ending at North Hollywood, Artesia and El Monte Stations. Through this Mobility On Demand Pilot, Metro aims to open up the mobility benefits provided by TNCs to a larger group of users.
Metro Micro	Metro Micro is an innovative, new Metro transit service consisting of on-demand shared rides for short trips in vans that will be operated by professionally trained Metro employees. This service will start with an initial soft launch of 60 days in which it will be available 7 days per week and 12 hours per day. The service zones include Watts/ Willowbrook, LAWA/Inglewood, Northwest San Fernando Valley, Highland Park/ Eagle Rock/ Glendale, Altadena/ Pasadena/ Sierra Madre and UCLA/VA Medical Center/ Century City. Metro Micro is intended to supplement Metro's fixed route network in these areas by operating in zones with less bus and rail coverage. It can be taken to connect to another mode of transit or can be used to arrive at one's final destination. Additionally, vehicles will be equipped with bicycle racks. Riders will be able to order a Metro Micro vehicle through the upcoming app, a web browser, or by calling the customer service number.
Customer Experience (CX) Plan	Metro's CX vision is to always put you first – your safety, your time, your comfort, and your peace of mind – when we connect you to people and places that matter to you. The 2020 CX Plan will start by identifying the most pressing pain points from Metro customer research and focus on COVID recovery. In 2021, the Plan will dig into journey mapping and a review of best practices internationally.



# Less Congestion

**Less congestion means managing the number of vehicles using LA County streets and highways to reduce the amount of time buses, cars, and trucks spend stuck in traffic each day.**

Metro, in partnership with the California Department of Transportation (Caltrans), advances the planning, environmental clearance, design and construction of major capital projects such as ExpressLanes, carpool lanes, freeway widening, interchange improvements, auxiliary lanes, freeway ramp improvements and other freeway capacity and operational improvement projects.

A key element of the Less Congestion Priority Area is the ExpressLanes Program, which in 2012, converted carpool lanes on I-110 and I-10 to ExpressLanes where single occupant vehicles (SOVs) are given the option to pay a variable fee to use the lanes and avoid delay, while carpoolers, vanpoolers and buses are permitted to use the lanes at no charge. Metro also works with local agencies to implement smaller scale improvements such as arterial widenings, intersection upgrades, ramp metering, traffic signal synchronization, corridor management and intelligent transportation systems (ITS) solutions.

# Highway Investment

Funded by Measure M and Measure R, the highway investments at Metro are listed in Figure 8.

Figure 8

## Highway Investment

HIGHWAY PROJECTS	\$ IN MILLIONS	ESTIMATED OPEN YEAR	DESCRIPTION
I-5 Capacity Enhancement (I-605 to Orange County Line)	1,410	2023	Constructs one carpool lane and one mixed-flow lane in each direction extending 6.4 miles through Cerritos, La Mirada, Santa Fe Springs and Norwalk. Includes interchange reconstruction and arterial modifications.
I-5 North Carpool Lanes – SR-134 to SR-170	637	2023	Adds a 10-mile segment of carpool lanes in each direction along the I-5 freeway to improve connections between the Burbank Media Center, Burbank Airport, Downtown Santa Clarita and Downtown Los Angeles. It includes the modification of the Empire Avenue intersection to a full diamond interchange, the re-alignment and elevation of the Metrolink commuter railroad adjacent to the freeway and the construction of a railroad grade separation.
Alameda Corridor East Grade Separations Phase II	1,685	2024	Constructs bridges or underpasses and improves the operation of other railroad intersections along a 35-mile stretch of the San Gabriel Valley.
Rosecrans/Marquardt Grade Separation	155	2024	Builds a grade separation at the intersection of Rosecrans/Marquardt in the City of Santa Fe Springs.
SR-71 Gap from I-10 to Rio Rancho Rd	379	2025	Adds three additional miles of SR-71 general purpose lanes in each direction, providing three continuous lanes in each direction to eliminate bottlenecks and improve traffic flow in sections where only two lanes exist today.
I-105 ExpressLanes from I-405 to I-605	530	2027	Caltrans in cooperation with Metro is evaluating alternatives to convert the existing high-occupancy vehicle (HOV) lanes to dynamically-priced, high-occupancy toll (HOT) lanes, also called ExpressLanes, in the eastbound and westbound directions of Interstate 105 (I-105) in LA County from the terminus of the existing HOV lanes west of Interstate 405 (I-405) in the City of Los Angeles to Studebaker Road in the City of Norwalk. The I-105 ExpressLanes Project limits include the installation of a new overhead tolling system and signage.
I-5 North Capacity Enhancements (SR-14 to Parker Rd)	679	2026	Constructs 14 miles of HOV lanes from SR-14 interchange to Parker Rd along the median. Other enhancements include extension of the northbound truck lane from Gavin Canyon undercrossing to Calgrove Bl off-ramp, addition of a southbound truck lane from Calgrove Bl on-ramp to SR-14, and addition of auxiliary lanes.

HIGHWAY PROJECTS	\$ IN MILLIONS	ESTIMATED OPEN YEAR	DESCRIPTION
Sepulveda Pass Transit Corridor (Ph 1) – ExpressLanes	311	2026	Metro is making strides to improve travel between the San Fernando Valley, the Westside, and Los Angeles International Airport (LAX). Measure M provides funding for ExpressLanes on the I-405 between the US 101 and I-10.
Highway Operational Improvements in Las Virgenes/Malibu subregion	175	2026	The Las Virgenes/Malibu highway operational improvements include widening, off-ramp, and overpass projects.
SR-57/SR-60 Interchange Improvements	422	2027	The SR-57/SR-60 Interchange Improvements are the next and final step in completing improvements to the 57/60 Confluence. Project improvements will stretch from just south of the northbound SR-57/SR-60 merge to eastbound SR-60 and south of the Golden Springs Drive overpass and along a portion of Grand Avenue from the City of Industry to the City of Diamond Bar.
I-10 ExpressLanes from I-605 to LA/ San Bernardino Line	197	2028	The I-10 ExpressLanes Extension project is identified as a Tier I (near-term) priority in the 2017 Metro Countywide ExpressLane Strategic Plan. This project will convert existing and future HOV lanes to a single HOT lane in each direction across 34.2 lane miles.
SR-138 Capacity Enhancement	200	2028	Widens SR-138 by adding new lanes in each direction to the San Bernardino County line.
Highway Operational Improvements in Arroyo Verdugo subregion	170	2030	The Arroyo Verdugo highway operational improvements include projects such as Central Ave Improvements/ Broadway to SR-134EB Offramp, Grandview At-Grade Rail Crossing Improvements, and SR-134/Pacific Ave Westbound Offramp Widening.
I-605 Corridor “Hot Spots” Interchange Improvements	2,639	2030	<p>Metro completed a Feasibility Study analyzing and identifying several “hot spots” along the SR-91, I-605, and I-405 corridors. These “hot spots” are chronic traffic congestion areas attributed to population/employment growth, increased trucking activity due to economic growth in the goods movement industry, and deficiencies in design, capacity, and operations of an older freeway system.</p> <p>The Early Action “hots spot” Projects (EAP) on I-605 are currently undergoing environmental assessment or final design approvals and will be constructed within the next 2-5 years.</p>
High Desert Multi-Purpose Corridor (ROW)	393	2034	The High Desert Corridor (HDC) project is considering construction of a new multi-modal link between State Route (SR)-14 in LA County and SR-18 in San Bernardino County. This project would connect some of the fastest growing residential, commercial and industrial areas in Southern California, including the cities of Palmdale, Lancaster, Adelanto, Victorville and the Town of Apple Valley.
I-405, I-110, I-105 and SR-91 Ramp and Interchange Improvements (South Bay)	1,413	2039	Constructs improvements in the South Bay to reduce traffic congestion. Examples include auxiliary lanes and ramp reconfigurations.

HIGHWAY PROJECTS	\$ IN MILLIONS	ESTIMATED OPEN YEAR	DESCRIPTION
Countywide Soundwall Construction	590	2040	SB-45 amended the California Street and Highway Code to transfer the programming and funding responsibilities of the Post 1989 Soundwall Retrofit Program to Regional Transportation Planning Agencies. In LA County, Metro assumed this responsibility. This program addresses the estimated 230 miles of freeways that are eligible for soundwalls within the County.
I-710 South Corridor Project (Ph 1 and Ph 2)	Ph 1 -5,697 Ph 2 - 1,512	Ph 1 – 2040 Ph2 - 2041	Evaluates modernization of the 710 freeway to improve truck/ traffic flows and safety on 18 miles of the freeway between the Ports of Los Angeles and Long Beach and the SR-60 freeway.
I-5 Corridor Improvements (I-605 to I-710)	2,036	2042	Adds one general purpose lane and one carpool lane in each direction, for a total of seven miles. When complete, there will be a total of five general purpose lanes and one carpool lane in each direction.
I-405/I-110 Int. HOV Connect Ramps & Interchange Improvements	504	2044	The new project provides direct connector ramps between ExpressLanes on the I-110 and I-405.
I-110 ExpressLanes Ext South to I-405/I-110 Interchange	599	2046	Extends the existing I-110 ExpressLanes southward one mile to the I-405 interchange while maintaining current general purpose lanes.
I-605/I-10 Interchange	1,287	2047	Interchange improvements in all directions (North, South, East and West).
SR 60/I-605 Interchange HOV Direct Connectors	1,055	2047	Improves interchanges from I-605 Rose Hills to I-10, and SR-60 from Santa Anita to Turnbull Canyon. Improvements include new auxiliary lanes, wider lanes and bridges, interchange connectors and ramp improvements.
I-405 South Bay Curve Improvements	883	2047	Adds segments of auxiliary lanes in each direction to improve traffic flow at on/off ramps for ten miles from Florence Av to I-110.
SR-710 North Corridor Mobility Improvement Projects	1,086	Varies	Since the inception of this project, Caltrans and Metro have been working in partnership to alleviate mobility constraints and traffic congestion in this study area that encompasses western San Gabriel Valley and the east/northeast area of Los Angeles. Metro is coordinating efforts with the various cities to begin implementation of the TSM/TDM projects identified in the Final EIR/EIS.

L RTP project costs may not match Measure M expenditure plan due to year of expenditure escalation and prior spending. Final alignments and limits to be determined during environmental processes.



# Less Congestion Programs, Plans, and Policies

The capital projects to lessen congestion are supplemented by several programs, policies, plans, and partnerships. In this area, most actions fall into the categories of Transportation System Management, Intelligent Transportation Systems, Transportation Demand Management, and goods movement programs. Metro’s Less Congestion programs, plans, and policies are shown in Figure 9.

Figure 9

## Less Congestion Programs, Plans, and Policies

TRANSIT PROJECT	DESCRIPTION
Transportation System Management (TSM)/ Intelligent Transportation Systems (ITS) Strategies	Transportation System Management (TSM) strategies are tools that use traffic engineering and operational measures to maximize capacity and reduce traffic delays on streets and highways. Local TSM improvements, which include signal synchronization and Intelligent Transportation Systems (ITS) strategies, are known to improve traffic flow, movement of vehicles and goods, air quality, and safety.
Arterial ITS	Metro funds approximately \$28 million per year in local arterial ITS projects which include improvements to traffic signals, signal synchronization, transit signal priority (TSP), and other ITS strategies. By using ITS on our local streets to address local traffic concerns and improve regional transportation corridor operational performance, overall mobility benefits are significantly enhanced. Arterial ITS projects are predominately funded by Prop C, Measure R, and Measure M through sub-regional programs.
Bus Signal Priority	Bus signal priority is a strategy that uses technology to communicate with the traffic signal at an intersection to request bus priority. Bus signal priority is currently being used on Metro’s Rapid Service, Culver City Bus, Torrance Transit, Foothill Transit, and Gardena (G-Trans). Metro wishes to expand this system to all major corridors, not just those with Metro’s Rapid service. Metro’s Countywide Signal Priority (CSP) Program is the largest implementation of multi-jurisdictional signal priority in the nation.
Arterial Performance Measurement	The Arterial Performance Measurement Program, known as Measure UP!, was developed to help local agencies understand how the arterial system performs historically and in real-time conditions. Performance measures such as vehicle hours of delay, person-hours of delay, travel-time variability, travel-time reliability, vehicle miles traveled, average travel speed, and average travel time are used when analyzing streets and freeways. Metro plans to implement an analysis tool that provides all performance measures for LA County.
The LA County Information Exchange Network (IEN)	The Los Angeles County Information Exchange Network (IEN) is a system that shares traffic signal information between agencies and facilitates the coordination of signal timing across jurisdictional boundaries. The IEN primarily shares second-by-second intersection data, incident and planned event tracking, and scenario management capabilities. IEN closely coordinates with Regional Integration of ITS (RIITS) to ensure regional transportation information sharing to support regional project needs.

TRANSIT PROJECT	DESCRIPTION
Regional Integration of Intelligent Transportation Systems (RIITS)	<p>RIITS is a program that enables the efficient compilation, management, and exchange of transportation information and systems. RIITS integrates and presents transportation information via data feeds to allow government agencies to exchange data with each other, and provides private companies access to the data to share with the public. RIITS consists of a physical network, operational system, and administrative processes. Information is currently exchanged with Caltrans Districts 7, 8, and 12, Los Angeles Department of Transportation, California Highway Patrol (CHP), Metro, Foothill Transit, LA County Department of Public Works and others. RIITS also houses applications such as Measure UP! and supports operational programs such as Southern California 511 and integrated corridor management (ICM) projects. A strategic planning exercise is currently underway to provide a 5-year roadmap for RIITS. New and emerging technologies and initiatives are being examined to determine how RIITS should be utilized and position. Items/activities such as Connected and Automated vehicles, Internet of Things, Big Data and other related impacts will be evaluated to best determine how RIITS can support, lead and/or champion these items.</p>
Integrated Corridor Management (ICM)	<p>ICM is an Intelligent Transportation System (ITS) strategy to manage non-recurring congestion along a corridor by utilizing advanced technologies and systems. ICM components include active monitoring of all transportation modes and facilities within the corridor, on and off the freeway, including ramp metering, traffic signal coordination, incident traffic management, advanced traveler information system, and other advanced technologies and techniques. Caltrans, Metro, and local agencies are piloting the I-210 Connected Corridor project that includes Integrated Corridor Management (ICM) strategies along I-210 in the San Gabriel Valley.</p>
Connect-IT: Los Angeles County Regional ITS Architecture	<p>Connect-IT (Los Angeles County Regional ITS Architecture) is a framework to guide the planning and deployment of ITS strategies. The framework helps local agencies and stakeholders to collaboratively operate its systems and address transportation issues and challenges in LA County. Connect-IT is accessed through a website for local agencies and stakeholders to view and add ITS projects and find information on ITS innovations and advanced technology.</p>
ITS Field Inventory Resource Sharing Tool (ITS FIRST)	<p>The ITS Field Inventory Resource Sharing Tool (ITS FIRST) is a website that is used to collect and share ITS assets and inventory information between local agencies. ITS assets include but are not limited to traffic signals, traffic controllers, CCTV cameras, fiber-optic communications, changeable message signs, and vehicle detection. This tool gives local agencies a database to maintain an inventory of ITS field assets and a mechanism to perform asset management.</p>
HOV (Carpool) Lanes	<p>In LA County, the HOV system includes freeway HOV lanes, HOV access ramps, park-and-ride lots, and transit stations along HOV corridors. Metro, in cooperation with Caltrans, is in various stages of planning, design and construction for additional HOV facilities across LA County.</p>
ExpressLanes	<p>In 2012, the carpool lanes on I-110 and I-10 were converted to ExpressLanes, where single occupant vehicles (SOVs) are given the option to pay a variable fee to use the lanes and avoid delay, while carpoolers, vanpoolers and buses are permitted to use the lanes at no charge. By using variable pricing based on the current usage level, traffic flow in the ExpressLanes is continuously managed to maintain speed and flow, providing a more reliable option.</p>
ExpressLanes Strategic Plan	<p>The 2017 Countywide ExpressLanes Strategic Plan builds on the success of the I-110 and I-10 Congestion Reduction Demonstration pilot program (also known as ExpressLanes) by establishing a vision for Metro to deliver a system of ExpressLanes for LA County using a network approach to maximize regional benefits. The network would be implemented in tiers approximately ten-years apart: Tier 1 – near-term (within 5-10 years), Tier 2 – mid-term (within 15 years), and Tier 3 – longer-term (within 25 years).</p>

TRANSIT PROJECT	DESCRIPTION
Traffic Reduction Program/ Congestion Pricing	Metro is conducting a Traffic Reduction Study (formerly called the Congestion Pricing Feasibility Study) to: determine if a traffic reduction program would be feasible and successful in LA County; determine where and how a pilot program with congestion pricing and complementary transportation options could achieve the project goals of reducing traffic congestion; and identify willing local partners for collaboration on a potential pilot program. The goals of the traffic reduction pilot program are to reduce traffic congestion, which makes it easier for everyone to get around, regardless of how they choose to travel, and provide additional high-quality transportation options.
Freeway Service Patrol	The Metro Freeway Service Patrol (FSP) is a congestion mitigation program managed in partnership with Metro, CHP, and Caltrans on all major freeways in LA County. It is the largest of its kind in the nation performing approximately 25,000 assists each month. The program utilizes a fleet of roving tow and service trucks designed to reduce traffic congestion by efficiently getting disabled vehicles running again, or by quickly towing those vehicles off of the freeway to a designated safe location.
LA SAFE	LA County Service Authority for Freeway Emergencies (LA SAFE) is the driving force and sponsor behind the Southern California 511 program and the Kenneth Hahn Callbox system. The goal is to help improve mobility and traffic in the LA County region by giving drivers the tools they need to travel safely and efficiently.
Southern California 511	511 was deployed in June 2010 consisting of an automated Interactive Voice Response (IVR) phone service and a website (Go511.com). The service provides users with real-time traffic information as well as transit, rideshare, and other related information. Since the deployment in June 2010, the system has supported over 18,000,000 users and has undergone a number of changes, such as the addition of real-time transit and parking information, and the deployment of a mobile app (go511). In addition to the traveler information services, 511 also allows callers to request motorist assistance similar to using a roadside call box.
The Kenneth Hahn Callbox System	The Kenneth Hahn Callbox System is comprised of over 1,000 callboxes installed throughout LA County freeways. The call box system was established to provide motorist aid service to the public and now acts as a safety net for motorists. An average of over 250 calls per month are generated from the callbox system. The Los Angeles County SAFE is the largest and most active motorist aid callbox system in California.
Los Angeles County Goods Movement Strategic Plan (Draft 2020)	The Los Angeles County Goods Movement Strategic Plan (2020) strives to achieve a comprehensive and holistic approach to addressing a multitude of interconnected challenges so that LA County will grow and thrive while balancing goals, including the efficient and effective flow of goods to support economic sustainability and prosperity. To achieve the goals, goods movement stakeholders across the County collaborated to provide a framework to evaluate LA County's freight competitiveness.
Goods Movement Technology	Metro uses ITS and advanced technologies to improve the movement of goods in and out of the Ports of Long Beach and Los Angeles. Goods movement technology projects have included truck platooning, drayage and container efficiency, and freight traveler information.
Clean Truck Program	At its January 2020 meeting, Metro Board passed Motion 8.1 directing staff to develop 710 Clean Truck Program as an Early Action Item under both the Goods Movement Strategic Plan (Plan) and I-710 South Corridor Project. The Program includes \$50 million in Metro-controlled funding sources as seed funding for the 710 Clean Truck Program.
Transportation Demand Management (TDM)	Transportation Demand Management (TDM) refers to strategies that increase transportation system efficiency and eliminate solo driver trips. Getting people out of their cars or encouraging forms of travel other than solo driving produces benefits ranging from increased travel efficiency, cost benefits, travel safety, and health benefits to helping reduce traffic congestion, reduce pollutants, and increase transit ridership. TDM often comprises a program of information, encouragement, and incentives to optimize the use of all modes in the transportation system.

TRANSIT PROJECT	DESCRIPTION
Metro Regional TDM Program	Metro's Regional TDM Program is a countywide transportation demand management toolkit that encourages and supports local jurisdictions in initiating, developing, and implementing their own TDM goals and initiatives. The TDM Toolkit and corresponding website is in development and will be available to all eighty-nine cities in LA County in early 2020. The website will promote TDM strategies by coordinating local TDM objectives and creating a comprehensive marketing strategy.
Regional Rideshare/Shared Mobility & Implementation	Metro, through policy, programming, advocacy, and education, is helping to develop a shared mobility resource. Some of the program's core functions involve assisting Employee Transportation Coordinators (ETC) in meeting the Southern California Air Quality Management District's (SCAQMD) Rule 2202 Employee Commute Reduction Program (ECRP). The program promotes implementing congestion management strategies by encouraging employees to use alternatives to single occupancy vehicles such as: carpooling, vanpooling, transit ridership, biking, and walking.
Carpooling Program	Carpooling is an inexpensive and effective travel option and involves finding nearby commuters to share the ride. Metro offers ride-matching services to find local SoCal residents looking to share the ride. User services involve finding someone in your area to match your commute trip. Metro also partners with the Orange County Transportation Authority (OCTA) and Ventura County Transportation Commission (VCTC) in RideMatch, a ridesharing service that matches individuals with similar commutes interested in ridesharing.
Metro Vanpool Program	Metro operates one of the largest publicly funded vanpool programs in the country. Metro provides coordination, administration support, and a financial subsidy for commuters and a convenient mobility option to getting around LA County, especially in areas less served by transit options.
Car Share Program	Metro partners with qualified car share companies to provide an effective first and last mile option for communities that need affordable car sharing alternatives at Metro-owned park-and-ride lots. The program includes designated parking spaces at various transit stations' park and ride facilities, allowing patrons to easily locate and pick up vehicles to use for anything from local errands to weekend getaways. This program provides ways/means to improve customer service and transit connection experience with more mobility options for transit patrons.
Parking Management	Metro's Parking Management Program was developed to enhance the transit rider's experience by more closely managing anticipated parking demand. Parking spaces at stations with paid lots are prioritized for transit customers through the use of a TAP-based rider verification system, which works to retain parking resources for Metro patrons. To make parking availability more transparent, Metro has also implemented the Parking Guidance System at highly utilized facilities to provide real-time parking availability information to transit riders looking for a spot.
Connected and Autonomous Vehicles	Connected vehicle (CV) technology is the use of advanced technologies and communication for vehicles to connect with other vehicles, infrastructure, and people. Metro continues to pursue potential CV applications that would benefit local agencies in LA County. Autonomous vehicle (AV) technology has the potential to disrupt existing transportation systems and cities through the deployment of self-driving vehicles that are safer and faster than human-operated vehicles. Metro continues working with local jurisdictions, agencies, and vendors/manufacturers to advance CV and AV technology in the region.

# Complete Streets

**Metro’s Complete Streets Policy defines complete streets as a comprehensive, integrated transportation network with infrastructure and design that allows safe and convenient travel along and across streets for all users.**

A complete streets network serves many users in a safe manner including: pedestrians, public transit users, bicyclists, people with disabilities, seniors, children, motorists, and movers of goods. Complete streets also have more greenery and sustainable elements to enhance the environmental sustainability of the transportation system. As a transportation funder, Metro can incentivize funding recipients to develop projects that meet complete street goals.

DRAFT



# Active Transportation Corridor Projects

The 2020 LRTP includes close to \$7 billion in funding for active transportation projects, including major facilities and bicycle and pedestrian programs at the local level. The major multi-use active transportation facilities funded in the LRTP are described in Figure 10.

Figure 10

## Active Transportation Investment

MAJOR TRANSIT PROJECT	\$ IN MILLIONS	ESTIMATED OPEN YEAR	LENGTH (MILES)	DESCRIPTION
Rail to Rail Active Transportation Corridor Segment A	140	2024	6	A 5.6 mile multi-use path connecting the Fairview Height Station of the soon-to-be-open Crenshaw Line in Inglewood to the Slauson A (Blue) Line station in South Los Angeles.
Rail to River Active Transportation Corridor Segment B				An approximate 4.5 mile active transportation corridor between the LA River to the Slauson A (Blue) Line station that connects to Segment A.
LA River Path – Central LA	365	2025 – 2027	8	An eight-mile bicycle and pedestrian path gap closure between Elysian Valley and Maywood, through downtown Los Angeles.
LA River Path – San Fernando Valley	60	2025	13	The San Fernando Valley LA River Path will connect the San Fernando Valley to the existing LA River Path near Griffith Park. This 13-mile path will help create a 51-mile continuous active transportation corridor from Long Beach to Warner Center.
City of San Fernando Master Bike Plan	5	2054	TBD	This project will create a bike path to run along the Pacoima Wash.

# Complete Streets Programs, Plans, and Policies

In addition to the major capital commitments, Metro advances complete streets through three foundational documents including Metro’s Complete Streets Policy (2014), First/Last Mile Strategic Plan (2014), and Active Transportation Strategic Plan (2016), which are the catalyst for several more plans and programs. Figure 11 shows the full range of complete streets programs, plans and policies.

Figure 11

## Complete Streets Programs, Plans, and Policies

PROGRAM NAME	DESCRIPTION
Metro’s Complete Streets Policy	Metro’s Complete Streets Policy views transportation improvements as opportunities to create safe, accessible streets for all users, including but not limited to pedestrians, public transit users, bicyclists, people with disabilities, seniors, children, motorists and movers of commercial goods. Through incremental changes in capital projects and regular maintenance and operations improvements, the street network will gradually become safer and more accessible for travelers of all ages and abilities. In partnership with state, regional and local efforts, this policy will create a more complete and integrated transportation network for all modes of travel in LA County.
Active Transportation Program	Measure M establishes the Metro Active Transport, Transit and First/Last Mile (MAT) Program, which over the course of 40 years, is anticipated to fund more than \$857 million (in 2015 dollars) in active transportation infrastructure projects throughout the region. This is a competitive discretionary program available to municipalities in LA County and will fund projects to improve and grow the active transportation network and expand the reach of transit.
Active Transportation Strategic Plan	Adopted in 2016, the Active Transportation Strategic Plan (ATSP) is Metro’s ongoing commitment to enhance access to transit stations, create safer streets, and develop a regional network to improve mobility for people who walk, bike, and take transit. The ATSP is a roadmap for Metro and stakeholders, including local jurisdictions and regional governments to set regional active transportation policies and meet transportation goals and metrics established in local, regional, state, and federal plans.
First/Last Mile (FLM) Program	In 2016, the Metro Board of Directors adopted policies (Motion 14.1 and 14.2), which prompted the creation of Metro’s FLM program. The three primary goals of Metro’s FLM are: (1) To identify and remove barriers for people walking or bicycling to their transit station or destination and plan/implement improvements to an individual’s trip. (2) Improve transit riders’ safety by providing safe infrastructure to complete their trips safely, regardless of their travel mode. (3) Enhance the customer experience for transit riders by addressing visual aesthetics and livability through infrastructure improvements.
FLM Strategic Plan	Metro developed a First/Last Mile Strategic Plan in 2014 to address the challenge that riders face getting from their home to transit and from transit to their final destination. FLM strategies extend station areas, improve safety and enhance the visual aesthetic. The Plan identifies barriers and potential improvements for the FLM portions of a transit trip.
Blue Line FLM Plan	This First/Last Mile (FLM) Plan was adopted in April 2018 and represents a first-of-its-kind effort to plan comprehensive access improvements for an entire transit line. The Plan covered all 22 stations on the Metro A (Blue) Line and piloted an inclusive, equity focused community engagement process. The Plan included planning-level, community-identified pedestrian and bicycle improvements within walking (1/2-mile) and biking (3-mile) distance of each A Line station. The Plan executed the methodology from the FLM Strategic Plan, including walk audits of every station area, development of draft Pathway Networks and project ideas, community engagement events, and finalization of Pathway Networks and project ideas.

PROGRAM NAME	DESCRIPTION
Inglewood FLM Plan	This plan, adopted by the Metro Board of Directors in January 2019, identifies pedestrian and bicycle improvements for stations in the City of Inglewood, including three stations on the Crenshaw/LAX Line (Fairview Heights, Downtown Inglewood, Westchester/Veterans), and one station on the Green Line (Crenshaw). This is the first FLM plan with committed implementation funding from the City of Inglewood via the City's 3% local contribution.
Gold Line Foothill Extension 2B FLM Plan	Adopted by the Metro Board of Directors in June 2019, the Plan includes FLM station area plans for five stations on the Gold Line Foothill Extension Phase 2B (Glendora, San Dimas, La Verne, Pomona, Claremont). The development of the station plans included close coordination with the Foothill Gold Line Construction Authority and the five cities around the station areas.
Aviation/96th St Station (Airport Metro Connector) FLM Plan	A new major transit hub will connect the LAX/Crenshaw and Green Metro Rail lines and a number of bus routes with the LAX Automated People Mover. Adopted by the Metro Board of Directors in June 2019, the Plan addresses FLM connections in the area surrounding the future station, located near the border of Los Angeles and Inglewood.
Westside Purple Line Extension FLM Plan Sections 2 and 3	Adopted by the Metro Board of Directors in May 2020, the Plan includes FLM station area plans for four stations on the Westside Purple Line Extension Sections 2 and 3 (Wilshire/Rodeo, Century City/Constellation, Westwood UCLA, and Westwood/VA ). The development of the station plans included close coordination with local jurisdictions, institutional stakeholders such as UCLA and the Veterans Administration, along with neighborhood and community groups.
Metro Micro Mobility Vehicles Program	The Metro Micro Mobility Program seeks to manage e-scooters and dockless bike share on Metro properties and right-of-way (ROW) focusing on maintaining a clear path of travel for transit patrons, developing an organized parking system, operating safety for users and pedestrians, and providing equitable availability and access. Through this program, Metro leases designated spaces for e-scooter and dockless bike share parking on Metro property, parking facilities, and Metro ROW.
New Mobility Regional Roadmap	Metro is building a coalition of civic partners to determine the best tools for managing new mobility in LA County and achieving Metro's Vision 2028 goal of doubling non-SOV driving trips by 2028. New Mobility includes, but is not limited to, ride-hailing, carsharing, e-scooter, bike share, and courier network services such as Postmates and Uber Eats.
Bicycle Education Safety Team (BEST) Program	Metro offers free classes for the community to learn how to bike safely, conveniently, and confidently. Metro also offers group rides that includes stopping at local destinations to help people feel more comfortable on a bike and realize where they can ride to in their neighborhood.
Connect Union Station Action Plan	The Connect US Action Plan was developed to improve historical and cultural connections in downtown Los Angeles by enhancing pedestrian and bicycle travel options through and between communities. At the center of the study is access to Los Angeles Union Station, a regional transportation hub for numerous rail, bus and shuttle services, as well as the future Regional Connector station at 1st/Central. The Connect US Action Plan is a joint effort between Metro and the Southern California Association of Governments (SCAG) and was developed in collaboration with various City of Los Angeles and County departments and agencies through the project's Technical Advisory Committee (TAC).
Metro Bike Share	Metro Bike Share is a docked bike share system which offers access to bikes at specific locations across the county. Smart Metro Bikes are available on the Westside and in North Hollywood. The Electric Metro Bike is a pedal-assisted bike that allows expanded opportunities for riders to complete their first/last mile connections from farther distances with less effort required to pedal.

PROGRAM NAME	DESCRIPTION
Metro Bike Hub	The Metro Bike Hub also offers onsite staff assistance, same-day repairs, accessory sales, bike classes and more at four locations across LA County. Hubs are located at Hollywood/ Vine, Union Station, El Monte, and Culver City. Secure bike parking is operated by BikeHub, Metro's Small Business Enterprise-certified contractor. Registered users may access the secure bike parking area 24 hours a day, seven days a week.
Green Construction Policy	Metro established a Green Construction Policy (GCP) in 2011 to reduce emissions during construction, as well as the Sustainability Plan Program to assist contractors with meeting CALGreen obligations. The GCP was updated in 2018, requiring contractors to use renewable diesel for all diesel engines and thus reducing the negative health impacts from diesel exhaust. This effort reaffirms Metro's commitment to protect the communities we serve, especially those disproportionately affected by air pollution.
Zero-Emission Fleet	Metro will transition to zero-emission buses systemwide. The G Line (Orange) will be the first to deploy electric-battery buses as part of its improvements project, scheduled for completion by 2025. With an original goal of 2040, Metro would like to fully electrify by 2030. Metro is also taking the lead in forming a Countywide Zero-Emission Trucks Collaborative to promote consistency among public agencies in working to catalyze the development and deployment of zero-emission trucks in LA County. This collaborative will include the Ports of Long Beach and Los Angeles, Caltrans, Southern California Association of Governments and the South Coast Air Quality Management District.
Metro Active Transport Program (MAT)	The MAT Program is a discretionary funding program in Measure M, and is the first dedicated funding for active transportation in a LA County sales tax measure. The program funds the development of new active transportation corridors and first/last mile projects, with a focus on equity. The MAT program will proceed in funding cycles of 2-5 years with the expectation of varying program emphasis areas over time.

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# Access to Opportunity

**Access to opportunity means investing in communities to connect people to what they need (jobs, education, healthcare, etc.) in a reasonable amount of time. Increasing access to opportunity involves bringing Metro’s transportation options closer to jobs and homes, and supporting small businesses, local economies and families. Many of the actions in this area are closely tied to Metro’s Equity Platform and related work, which is expanded on in the equity section.**

Figure 12 describes the programs, plans and policies that comprise the Access to Opportunity Priority Area.

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# Access to Opportunity Programs, Plans, and Policies

Figure 12

## Access to Opportunity Programs, Plans, and Policies

PROGRAM NAME	DESCRIPTION
Transit Oriented Communities	Metro is redefining the role of the transit agency by expanding mobility options, promoting sustainable urban design, and helping transform communities throughout LA County. At the forefront of this effort is Metro's vision to work with communities to create transit oriented communities (TOCs) across LA County. TOCs are places that, by their design, make it more convenient to take transit, walk, bike or roll than drive.
Metro's TOC Policy	<p>In 2018, Metro adopted the Transit Oriented Communities (TOC) Policy. The TOC Policy defines:</p> <ol style="list-style-type: none"> <li>1. TOCs for Metro and establishes Metro's goals and objectives to enable TOCs;</li> <li>2. TOC activities that will be considered a transportation purpose and thus eligible for funding under the Measure M Guidelines by Metro and by its municipal partners through Local Return as well as for other eligible sources at the federal, state, and local level; and</li> <li>3. Defines areas where Metro leads (implements directly) and where Metro supports partners to undertake TOC Activities.</li> </ol>
Draft TOC Implementation Plan	Metro is currently in the process of developing the Draft TOC Implementation Plan that will outline a series of initiatives and strategies with corresponding measures and reporting that Metro can realize directly or in partnership with others. This draft TOC plan is expected to be presented to the Metro Board for adoption in 2020.
TOD Planning Grant Program	Since 2011, Metro has provided \$24.6M grant funding to 32 jurisdictions across LA County to develop and adopt transit supportive plans around a half-mile radius around 95 Metro/MetroLink transit stations.
West Santa Ana Branch TOD Strategic Implementation Plan and Program (TOD SIP)	The TOD SIP provides an overarching vision and strategic guidance for local West Santa Ana Branch (WSAB) jurisdictions to use as a resource as they develop and implement their own plans, policies and economic development and mobility strategies in the 12 WSAB station areas along the alignment. Additionally, in 2019, the Metro Board approved a \$1M implementation program to fund WSAB jurisdictions to implement TOD SIP recommendations.
Joint Development (JD) Program	Joint Development (JD) helps foster TOCs by leveraging properties Metro owns to advance community development goals while attracting new riders to the Metro system. These properties are often parcels of land acquired for transit projects for Metro stations, construction staging or other supportive uses and have been determined to have transit-oriented development potential. Following a multilayered community engagement and selection process, Metro collaborates with qualified developers to develop its sites through joint development agreements, typically culminating in a long-term ground lease.
Metro Affordable Housing Policy	In July 2015, the Metro Board of Directors adopted an updated JD Policy to encourage development of affordable housing in LA County. The JD Policy includes a goal that 35% of total housing units in the JD portfolio be affordable to households earning 60% of area median income (AMI) or below and allows Metro to discount JD ground lease rents below fair market rent to accommodate affordable housing. The JD Policy is in the process of being revised as Metro seeks to further strengthen its commitment to addressing the region's pressing affordable housing and homelessness crisis.

PROGRAM NAME	DESCRIPTION
Metro Adjacent Development Review	This program works with local municipalities and developers building near the Metro system to ensure safety during and after construction and identify synergies between new development and Metro stations and stops to increase ridership and reduce auto dependency.
Metro Adjacent Transit Connected Housing (MATCH) Loan Fund	In August 2016, the Metro Board approved investing \$9,000,000 into the Metro Adjacent Transit Connected Housing (MATCH) Program which through a partnership with Community Development Financing Institutions (CDFIs) and philanthropic organizations, offers low interest loans to support the development and preservation of affordable housing units near transit.
TOC Small Business Loan Program	In August 2016, the Metro Board approved a \$1,000,000 investment in the TOC Small Business Loan Program. Originally geared toward funding tenant improvements in TODs, in the spring of 2020, the Metro Board authorized changes to allow the funding to be used to provide emergency relief to small businesses near transit impacted by the COVID-19 health pandemic and economic crisis. Metro is currently exploring opportunities to improve upon the original TOC Small Business Loan Program.
Metro's Co-Powerment Programs	Co-powerment programs expand access to opportunities for small businesses and traditionally underrepresented residents in Metro's service area. The two areas of focus are economic development and workforce development.
Disadvantaged Business Enterprise Program (DBE)	The DBE program applies to Federal Transit Administration (FTA) funded contracts and exists to increase the number of historically underutilized (minority or women-owned) disadvantaged businesses and to equip them with tools and resources they need to do business with Metro. The groups that this program covers are: African Americans, Asian Pacific Americans, Native Americans, Hispanic Americans, Subcontinent Asian Americans, and women (including Caucasian women). In 2020, there are more than 1,400 DBE firms at Metro.
Small Business Enterprise Program (SBE)	Applicable to state and locally funded contracts (non-federal), SBE is similar to the DBE certification, except it is race and gender-neutral, and contracts businesses with a net worth of less than \$1.32 million and average revenue over the previous three years of less than \$23.98 million. In 2020, there are more than 2,100 SBE firms that are certified.
Small Business Prime Program	The Small Business Prime Program sets aside applicable contracts (\$3,000 to \$5 million) for which only Metro certified Small Business Enterprises (SBEs) can compete. SBE Primes are required to perform a minimum of 30% with their own workforce, and may subcontract 70% of the work to SBEs, medium or large firms. Metro actively encourage SBEs to use traditional primes as subcontractors to help mentor and fulfill increased contracting responsibility.
Disabled Veteran Business Enterprise Program (DVBE)	This program establishes a goal of contracting with DVBEs at 3% for all goods and services over \$100,000 for non-federally funded competitive contracts.
Medium Size Business Enterprise Program (MSZ)	Metro has established a Medium-Size Business Enterprise (MSZ) program to provide contracting opportunities for medium-size businesses and allow for competition with similar size firms, The MSZ program may be applied to contracts ranging from \$12M to \$30M, bridging the gap between small businesses and large business concerns by creating contracting opportunities for which only MSZs may compete. MSZs are defined as firms with a three (3) year average of \$25 million to \$250 million in gross annual revenue and with more than 25 employees.
Contracting, Outreach, and Mentorship Program Protégé (COMP)	This is required on applicable contracts over \$25 million. Proposers responding to Request for Proposals (RFPs) with this requirement must outline how they will provide technical assistance such as estimating, scheduling, management and other best practices to DBE, SBE, and DVBE subcontractors on their project. This mentoring plan will be documented in the COMP submittal and scored as part of the RFP evaluation. The COMP is designed to increase the practical and technical capabilities of the small business subcontractor (protégé).

PROGRAM NAME	DESCRIPTION
Contractor Development and Bonding Assistance Program (CDBAP)	The CDBAP assists Metro-certified SBE, DBE, and DVBE firms to secure necessary bonding required to bid on Metro construction projects. The program also assists with obtaining or increasing bonding capacity and collateral support for bids, performance and payment bonds, along with technical education, training, and contractor support. This program helps to increase the participation of small/disadvantaged businesses on Metro projects. Additionally, the CDBAP is comprised of a consortium of local agencies including Los Angeles World Airports, the Los Angeles County Department of Water and Power and the Port of Los Angeles to support the development and growth of small businesses.
Workforce Initiative Now-Los Angeles (WIN-LA)	WIN-LA is an initiative to build the workforce of the future through a career pathway that provides opportunities for people to work in the transportation sector and move up through the ranks. The initiative delivers workforce development and skills training for transportation jobs by partnering with private-sector employers, community colleges, labor organizations, and others. The focus is on construction, operations/maintenance, administration, and professional services. Participants include veterans, previously unemployed, emancipated foster youth, those involved with the justice system, those receiving public assistance, single custodial parents, and formerly homeless.
Project Labor Agreements (PLAs)	PLAs articulate goals for Metro construction contractors to train and employ economically disadvantaged residents, specifically targeting minorities and women. Each month the contractors must report how successful they have been in meeting their goals. As of May 2020, there have been 43 projects with PLAs to date since 2012, worth over \$8B in construction, with over 2,000 apprentice workers on three mega projects alone. The PLAs encourage the hiring of female workers on construction jobs, with a goal of 6.9% participation. Metro's Women Build Metro LA (WBMLA) committee was established in support of Metro's PLAs and Construction Careers Policy to increase female participation in the transportation-related workforce.
Business Interruption Fund (BIF)	BIF provides some financial support (\$10,000,000 annually) for "mom and pop" businesses immediately adjacent to the Crenshaw/LAX corridor, Purple Line Extension corridor, Little Tokyo area around the Regional Connector, or a designated construction staging/storage area. The maximum \$50,000 grants are provided to cover verified business losses due to Metro construction.
Business Solutions Center (BSC)	Authorized by the Metro Board in 2014, this program helps "mom and pop" businesses with 25 or fewer full-time employees that are directly impacted by Metro rail projects. Through this program, professionals assist and teach business owners about long term business planning, website development, marketing on social media, assessment of their IT systems, accounting management, and access to financial capital.
Workforce Of Tomorrow – E3 Initiative	Metro is investing in the next generation of transportation workers through the E3 Initiative to expose, educate, and employ the next generation of LA County. The initiative's mission is to prepare LA County youth for career and college pathways in the global transportation infrastructure industry by teaching them transferrable Science, Technology, Engineering, Arts and Mathematics (STEAM) industry skills.
Metro's Transportation School	Metro, in partnership with the County of Los Angeles, is developing a Transportation School, which will prepare LA County youth for career and college pathways in the global transportation industry. The school's curriculum will be developed to teach students transferrable STEAM industry skills focused on science, technology, engineering, arts and math.
Teacher Externship Program	This is a six-week summer program for teachers from LA County middle and high schools to learn about the transportation industry and develop a project-based learning experience for their students. Teachers who participate are given stipends.

PROGRAM NAME	DESCRIPTION
Entry Level Trainee Program (ELTP)	This is an entry-level program for recent college graduates to get work experience and job skills as a Transportation Associate 1 at Metro.
Transportation Career Academy Program (TCAP)	This is a summer internship program at Metro for transit dependent juniors and seniors in high school who live or attend school near Metro rail. This offers the students real-world experience and a chance to learn about transportation careers.
Los Angeles Trade and Technical College (LATTC) Metro Joint Apprenticeship Committee (JAC)	JAC is a training program designed to provide rail maintenance personnel with introductory skills, abilities, techniques, tools, and practices to perform duties related to maintenance of rail vehicles.
Metro Bridge Academy	This is a free, paid four-week academy that trains unemployed individuals to become a Metro operator. This academy is built through a partnership between Metro, Los Angeles Valley College, and Community Career Development, Inc.
Regional EZ Transit Pass	The Regional EZ pass is a monthly pass good for local travel on 23 different public transit carriers throughout the Greater Los Angeles region. The EZ pass works with fare levels, referred to as zones, and eliminates the need for multiple passes when transferring between Metro transit and other participating municipalities. Seniors and persons with disabilities have the opportunity to receive additional discounts with appropriate verification.
LIFE Program	The Low-Income Fare is Easy (LIFE) program, considered a fare subsidy program, provides transportation assistance to low-income individuals in LA County. LIFE offers fare subsidies that may be applied toward the purchase of a Metro pass, a LIFE-participating operator pass, or free regional ride options. Qualifying riders can save more on Metro 7-Day, 30-Day or toward fare on participating transit operators with LIFE benefits. These benefits are loaded directly onto TAP cards. The system launch eliminated the use of paper coupons and tokens, enabling LIFE patrons to load their subsidies on their TAP cards.
Universal College Student Transit Pass (U-Pass Program)	In May 2016, the Metro Board approved the Universal College Student Transit Pass (U-PASS) Pilot Program. The U-PASS Program provides college students of participating schools with greater fare discounts and an expedited activation process administered on campus. The U-Pass is currently valid on Metro and nine municipal agencies.
Transitional Pass Program (GradPass Program)	The GradPass Program, also a transitional reduced fare program, is for graduating U-Pass holders allowing eligible participants to purchase Metro fare at the reduced college/vocational rate. It offers an additional 12 months after graduation to help students as they transition out of academia and into the workforce.
Employer Annual Pass Program (EAPP) – Annual Transit Access Pass (ATAP)	A regular ATAP is good on all Metro bus and rail services including Freeway Express services (Silver Line, Express). The program allows employers to purchase annual non-discounted passes for individual employees. Employers and employees may qualify for commuter benefits, which will significantly reduce the cost of the employee pass and act as a business tax benefit for the employer.
Employer Annual Pass Program (EAPP) - Business Transit Access Pass (BTAP)	Under the BTAP Program, employers are required to purchase reduced fare annual passes for all employees at a worksite. A small percentage of employees may be exempted for approved reasons, such as Metrolink and vanpool users or those with unconventional work assignment, such as having a night shift work schedule.
Employer Annual Pass Program (EAPP) - Staff and Faculty Pass Pilot Program (E-Pass)	In 2016, with the inception of the U-Pass Program, college staff and faculty requested a similar program for the administration. Commute Services is currently working with the Office of Management and Budget (OMB) on a Pilot Program based on a per-boarding cost and administered through partnership agreements, similar to the U-Pass Program. As of May 2018, OMB has approved 16 businesses for participation in this program.



PROGRAM NAME	DESCRIPTION
Employer Annual Pass Program (EAPP) - Promotional Employer Pass (PEPP) Program	As an introduction to EAPP Programs, the Promotional Employer Pass is open to new businesses who are not currently participating in the EAPP Program.
Residential Transit Access Pass (RTAP)	Based on past practice, the current Residential TAP (RTAP) program offers discounted passes to official Metro Joint Development projects under the Business Transit Access Pass (BTAP) program.
K-12 U-Pass Pilot Program	In the fall of 2019, Metro partnered with MoveLA, LA Promise Fund, The South Los Angeles Transit Empowerment Zone (SLATE-Z) and LAUSD to promote a U-Pass K-12 Pilot Program. The grant, funded from the 11th Hour Schmidt Family Foundation, provided 400 students with an unlimited U-Pass for the 2019-2020 academic year.
Youth on the Move Pilot Program	Metro is approving a one-year pilot program to explore multiple options, which include, but are not limited to, lowering, and extending the eligible age range of the Youth on the Move program to reach out to more youth participants. The program benefits include providing transportation assistance to foster youth transitioning out of foster care into self-support through the Independent Living Program managed by the Los Angeles County Department of Children and Family Services.
Unsolicited Proposals Policy	In May 2018, Metro established an Unsolicited Proposals Policy which established a process for Metro to engage the private sector by accepting written proposals for the purpose of developing partnerships that are not in response to an issued request from Metro. This policy provides a pathway for Metro to implement projects that otherwise might not have happened until well in to the future, if at all. Unsolicited Proposals can lead to a demonstration, pilot project, such as the Mobility on Demand first/ last mile pilot with Via, or even full deployment across Metro's system.
Comprehensive Pricing Strategy	The Metro Comprehensive Pricing Study (CPS) is a system-wide review of Metro's pricing policies for all of its transportation services, including fares, bike share, parking and tolls. Vision 2028 directs staff to conduct a comprehensive transportation system pricing study to determine options for meeting goals of revenue, equity, security, ridership, and user experience, and to implement pricing policies arising from the study.

# Sustainability

Metro's mobility investments are largely oriented towards sustainable outcomes, and therefore sustainability is woven throughout actions that comprise the four priority areas. Investments in bus, rail, walking, bicycling and shared-mobility inherently produce less harmful emissions than a single-occupant motor-vehicle trip while consuming less natural resources. But Metro's work in sustainability does not stop there. Sustainability is a value at Metro that influences our work across the agency.

Sustainability is fundamentally about meeting the needs of the present without compromising the ability of future generations to meet their own needs. In this way, sustainability aspires to achieve intergenerational equity to ensure that future generations benefit from the opportunities and resources that prior generations enjoyed. This section explores the work Metro is undertaking to ensure that our sustainable mobility systems reduce harmful emissions, reduce water and energy use and are resilient in the face of a warming climate.

Sustainability Vision: Create an organizational culture and workforce that continually integrates the principles of sustainability into all aspects of decision making and execution to enhance communities and lives through mobility and access to opportunity.

Metro's commitment to sustainability is guided by the following principles:

1. Implement sustainable practices and initiatives that advance and enhance the goals of Metro's Vision 2028 Strategic Plan.
2. Align sustainability projects and initiatives to support Metro's Long Range Transportation Plan.
3. Establish measurable key performance indicators to track the implementation and success of our sustainability strategies and actions.
4. Achieve our sustainability goals through transparent and authentic engagement with our stakeholders and community members.
5. Foster a culture of sustainability at Metro through staff education, workforce development and increased capacity.
6. Encourage innovation in strategic planning and sustainable practice through adaptability and resilience.
7. Strengthen regional sustainability efforts by providing leadership and collaborating with regional partners and agencies.

Further, the very nature of our sustainability work requires close collaboration and partnership with local, regional and state public agencies as well as private sector partners to achieve our shared climate and sustainability goals.

## Key California Climate and Sustainability Practices

California continues to lead the nation as one of the most progressive states for sustainability and climate change policy. Below is a concise summary of some of the more prominent policies that guide Metro's work directly or through partnerships.

### Greenhouse Gas Emissions Reduction

Senate Bill 32 (Pavely, 2016) and Assembly Bill 32 (Nunez, 2006) – AB 32 requires California to reduce its overall greenhouse gas emissions to 1990 levels by 2020 and established the state's cap-and-trade program to help achieve this goal. SB 32 goes further to require California to reduce greenhouse gas emissions 40 percent below 1990 levels by 2030.

### Cap-and-Trade Extension

Assembly Bill 398 (Garcia, 2017) – Law extending California's cap-and-trade program, established by AB 32, through 2030

### Sustainable Transportation Planning

Senate Bill 375 (Steinberg, 2008) – Transportation planning legislation that requires Metropolitan Planning Organizations (MPOs) that prepare a Regional Transportation Plan (RTP) to adopt a Sustainable Communities Strategy (SCS) that sets goals for the reduction of greenhouse gas emissions from automobiles and light trucks in a region. The California Air Resources Board (CARB) sets the greenhouse gas reduction targets in consultation with the MPO for the LA County region, the Southern California Association of Governments (SCAG), and then works with Metro and the cities to help achieve those targeted greenhouse gas reduction targets through a combined RTP/SCS strategy.

### California Air Resources Board Oversight and Reporting

Assembly Bill 197 (Garcia, 2016) – A companion bill to SB 32 requiring CARB to report regularly to the state legislature on its progress in implementing the state's climate policies, including progress on the aforementioned RTP/SCS.

### Renewable Energy Procurement

Senate Bill 100 (de Leon, 2018) and Senate Bill 350 (de Leon, 2015) – Energy legislation that requires the state to procure 60 percent of all electricity from renewable sources by 2030 and 100 percent from carbon-free sources by 2045; double the energy efficiency of existing buildings; and allow greater electric utility investment in electric charging infrastructure.

### Community Air Protection

Assembly Bill 617 (Garcia, 2017) – Companion bill to AB 398 that extends California's cap-and-trade program for greenhouse gas emissions. The legislation increases air monitoring requirements and penalties for polluters who exceed limitations in vulnerable communities.

### California Climate Registry

Senate Bill 1771 (Sher, 2000) – Established the California Climate Registry, which cataloged early greenhouse gas emission reductions and set reduction goals and standards for measurement and verification, as a precursor to AB 32 as well as other state efforts.

# Key Metro Climate and Sustainability Policies and Programs

Metro continues to evolve its policies and programs to adapt the latest innovative practices and be responsive to our evolving climate challenges. The following climate and sustainability policies and programs provide a sample of the breadth and depth of sustainability work that Metro is pursuing.

## Southern California Association of Governments Regional Transportation Plan & Sustainable Communities Strategy (SCAG RTP/SCS)

SCAG prepares an RTP/SCS, a long-range regional planning document that coordinates land use and transportation strategies across the five county SCAG region to help the state of California achieve its climate goals. The Plan, required by the state of California and the federal government, is updated by SCAG every four years as demographic, economic and policy circumstances change. Metro is a key participant in this process, contributing many of the sustainable mobility projects that will help achieve the GHG emissions reductions identified in the Plan.

## Zero Emission Buses (ZEB)

Metro's vehicle fleet accounts for 80 percent of its total energy consumption per year. Reducing criteria air pollutant emissions is critical to protecting public health and reducing air pollution. Metro has already replaced over 220 aging bus engines with near-zero emission engines and plans to continue, replacing at a rate of 180 engines per year. This initiative is not only increasing the operating life of existing buses, but more importantly, it is reducing NOx and PM emissions from our bus fleet. Additionally, we have adopted a comprehensive plan to transition to a 100 percent zero emission electric bus fleet by 2030. These initiatives will significantly reduce NOx, PM and GHG emissions. The following documents have more details on Metro's plans to transition vehicle fleets:

- > Zero Emissions Bus Master Plan (2020)
- > Electric Vehicle Implementation Plan (2020)

## Climate Action and Adaptation Plan (CAAP)

Metro completed an update of the CAAP in 2019 which further commits our agency to reducing GHG emissions and building climate change resilience within our transportation system and across the region. Thus far, Metro has completed several energy assessments and implemented large-scale projects, including LED lighting retrofits, a transition to RNG for our bus fleet, a bus electrification schedule and various system upgrade installations at rail and bus maintenance divisions.

## Climate Safe Infrastructure Adaptive Design (AB 2800)/ Climate Safe Infrastructure

Metro has participated in this statewide initiative to understand how the state of California can better prepare its existing and new infrastructure for climate conditions that will be increasingly different from the current ones. The overarching goal is to ensure a climate-safe future by incorporating climate change data into infrastructure design, construction, and operations and maintenance. Metro is taking steps to fully incorporate climate adaptation into its planning, procurement, asset management and operations.

## Sustainable Design Training

All successful Metro Call for Projects grant recipients, beginning with the 2013 Call for Projects, are required to attend a Metro-sponsored Sustainable Design Training and submit a Sustainable Design Plan for their project. The training has four main objectives – 1) Train Call for Project applicants on how to develop a sustainable design plan, 2) Educate applicants on the components of a sustainable design plan, 3) Provide examples of sustainable outcomes and 4) Estimate performance results and quantify benefits.

## Metro's Growing Greener Workforce

Implemented in 2017 to create a more resilient and sustainable Los Angeles by providing people with knowledge through Metro sponsored trainings and professional development. Trainings are available in-person or online and allow for local professionals to continue to advance their career and gain relevant industry certifications.

## Metro Environmental Construction Awareness (MECA)

The Program is a set of video, text, and hotlink resources focused on specific environmental regulations and practices to be considered in proposal preparation and implementation. The resources provided should be used as a basis for understanding project expectations; to apply proven sustainability solutions throughout a project from its inception; and to learn the concepts, terminology, and procedures Metro's Environmental Compliance and Sustainability Department (ECSD) uses.

## Sustainable Acquisition Program

Currently in development, the program identifies strategies to change existing behavioral and purchasing practices to minimize both the upstream and downstream impacts of procured materials.

## Transportation Electrification Partnership

Metro is a key partner in the Transportation Electrification Partnership (Partnership), an unprecedented multi-year partnership among local, regional, and state stakeholders to accelerate transportation electrification and zero emissions goods movement in the Greater Los Angeles region. The Partnership was established by the Los Angeles Cleantech Incubator (LACI) in May 2018 to accelerate the adoption of transportation electrification across light and heavy-duty vehicles, to reduce greenhouse gas emissions and to improve air quality.



## Water Action Plan (2010)

The Plan provides recommendations for water conservation and cost-benefit analysis of those recommended actions for Metro's consideration. It also recommends next steps for the refinement, implementation, and ongoing optimization of the Plan and its associated strategies. The intent of this Plan is to determine the potential for water conservation opportunities and cost-saving measures consistent with Metro's environmental policies and its implementation of an Environmental Management System (EMS). An update to the Water Action Plan is forthcoming.

## Environmental Management System (EMS)

EMS creates a framework for implementing best practices that help ensure compliance with federal, state and local environmental regulations, pollution prevention and sustainability goals and maintains the International Organization for Standardization (ISO) 14001:2015 certification by conducting both internal and external third-party audits. Using the ISO 14001:2015 framework of Plan-Do-Check-Act, Metro EMS builds on Metro's Environmental Policy to synchronize operational best practices with the agency's larger environmental and sustainability goals and helps to increase employee awareness on how to reduce impacts on the environment.

## Resiliency Indicator Framework (2015)

The Resiliency Indicator Framework established a mechanism to measure and evaluate climate adaptation implementation priorities to ensure infrastructure resilience and maintain a good state of repair. These indicators have a broad, multi-hazard application across Metro as they facilitate continual improvement, tracking the effectiveness of our planning, construction, and operational activities in increasing agency-wide resilience.

# Moving Beyond Sustainability

In the fall of 2020, Metro released the Moving Beyond Sustainability Plan (MBS) – a comprehensive sustainability strategic plan framework to guide sustainability activities over the next ten years and beyond. The title is a reflection of the fact that while our day-to-day mobility operations inherently advance sustainability by reducing GHG emissions, we can and will do more. Our work intends to move beyond sustainable mobility as we increase access to opportunity, conserve resources, foster vibrant communities, improve public health, drive economic development and transform LA County.

Building on over a decade of sustainability policies, plans and programs, MBS will be Metro's most comprehensive sustainability planning document to date and sets goals, strategies and actions that align with and emanate from other key Metro guidance documents, including: Vision 2028, Long Range Transportation Plan, Equity Platform Framework and our Resiliency Indicator Framework. In addition, recognizing that Metro's success is dependent on collaboration with our public agency partners, MBS, aligns with and supports parallel efforts and plans underway at LA County and the City of Los Angeles, including LA's Green New Deal and Our County plans.

MBS will be a living document, adaptive to people's needs, a rapidly changing climate, new learning, continuous improvement and new opportunities for partnerships. Upon final adoption of the Plan by the Metro Board of Directors (anticipated Fall 2020), the plan will be available at Metro's sustainability website: <https://www.metro.net/projects/sustainability/>

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# Equity

The LRTP update began with equity as a guiding theme. In February 2018, the Metro Board adopted the Equity Platform, confirming the agency's commitment to evaluate areas of the most need in the County and intentionally reevaluate agency priorities to advance opportunities for those who are faring the worst in the region. The following section describes Metro's Equity Program and the LRTP's relationship to advancing equity through the Equity Platform, a Definition of Equity, Equity Focus Communities, and Title VI analysis. Title VI of the Civil Rights Act of 1964 applies to programs and activities receiving federal assistance to protect people from discrimination based on race, color, and national origin. Transit operators are required to apply Title VI to operational decisions and contracting practices.

## Equity Platform

In 2018, Metro adopted its Equity Platform to help ensure system changes prioritize those most in need of improved access to opportunity. Metro recognizes that there are deep-rooted and pervasive racial and socioeconomic inequities that create disparate results and impacts, even when the intention is to help all. Accordingly, we need an understanding of those disparities and an intentional focus on those faring the worst in order to truly improve access to opportunity for all. The Equity Platform is structured around four pillars:

- I. Listen and Learn;
- II. Define and Measure;
- III. Focus and Deliver; and
- IV. Train and Grow.

The LRTP was developed in accordance with these pillars, through robust public engagement, as well as clearly defining our goals and performance measures for tracking our effort to deliver better access and mobility in the future.

## Defining Equity

As part of our commitment to the Equity Platform Framework, Metro has developed a definition of equity. This definition gives each facet of Metro and our community partners a starting place for understanding what equity means in our projects, plans and partnerships. The definition was developed with input from the Metro PAC in 2019.

Equity is both an outcome and a process to address racial, socio-economic and gender disparities, to ensure fair and just access – with respect to where you begin and your capacity to improve from that starting point – to opportunities, including jobs, housing, education, mobility options and healthier communities. It is achieved when one's outcomes in life are not predetermined, in a statistical or experiential sense, on their racial, economic or social identities. It requires community informed and needs-based provision, implementation and impact of services, programs and policies that reduce and ultimately prevent disparities.

As it relates to the LRTP, the definition of equity is intended to apply broadly across Metro's range of activities and investments described in the Plan.

## Equity Focus Communities

As part of the LRTP, Metro has defined “Equity Focus Communities” (EFCs). EFCs are a set of geographies that Metro staff developed with the Equity Working Group of the Policy Advisory Committee (PAC). The purpose of the Working Group was to determine the location of underserved communities and analyze data that identified disparate outcomes. The development of a definition of Equity Focus Communities was reviewed by experts at the University of Southern California (USC) Program for Environmental and Regional Equity (PERE) in consultation with the Metro PAC.

As part of defining EFCs, Metro looked at more than 30 indicators of opportunity across the following categories:

- > Jobs
- > Housing
- > Education
- > Public Health/ Environment
- > Safety/ Security

Indicators such as households within a half mile of parks were calculated for the LA County population across a variety of socio-demographic risk factors including:

- > Race
- > Income
- > Age
- > Gender
- > Birthplace
- > Disability
- > Family Structure
- > Car Ownership
- > Housing Tenure
- > English Speaking

As part of the process of understanding EFCs in LA County, these socio-demographic risk factors were correlated with opportunity factors. Ultimately, in partnership with the PAC Equity Working Group and USC PERE, we determined EFCs based on two demographic factors that have historically been determinants of disinvestment and disenfranchisement, household income and race/ethnicity, and a third factor, households with low vehicle ownership. Incorporating the characteristic of households without a car presents an opportunity to target new mobility investments in neighborhoods with a higher propensity to take full advantage of them.

The identified communities represent geographic areas that have the following socioeconomic characteristics: more than 40 percent of households are low-income and either 80 percent of households are non-white or 10 percent have no access to a vehicle. Collectively, these areas represent about 30 percent of the county’s population. EFCs are communities that have experienced historic disinvestments, reduced access to opportunity and housing, and policy decisions that have resulted in environmental justice disparities. As such, these communities have a higher degree of various negative outcomes and are those with the greatest need. EFCs are used to calculate several performance measures in the LRTP.

## Title VI Analysis

A Title VI analysis is performed as part of the LRTP to assess the transportation impacts on distinct socioeconomic groups in LA County. Similar to analysis done with EFCs, Title VI analysis uses census data as the foundation for understanding socio-economic characteristics and evaluating differences in opportunities based on those population characteristics. The Title VI analysis uses the census tract geography to analyze the following transportation impacts:

- > Job accessibility within 60 minutes via transit; and
- > Mode choice by income quintile.

The results of the Title VI analysis using these designated geographies are described in Chapter 5.

# Financial Model and Assumptions

The 2020 L RTP financial forecast is Metro's plan for funding the capital program. It helps determine funding strategies for capital projects and the allocation of state and federal grants. It demonstrates to our funding partners, at the state, federal, and local level, that we anticipate having the resources to meet our financial commitments. For federal New Starts funds, the financial forecast helps demonstrate to the Federal Transit Administration (FTA) that Metro has the financial capacity to build and operate the grant funded transit line.



The financial forecast covers the 30-year time horizon of the LRTP and is based on numerous cost and revenue assumptions. It funds an estimated \$400 billion of transportation capital and operating costs countywide. This figure includes all forecasted investment in transportation projects and services in LA County from FY21-2050.

The LRTP financial forecast includes all projects and programs approved by the Metro Board, including the commitments in the Measure R and Measure M Expenditure Plans. The financial forecast shows that Metro can fund these commitments on their planned schedule, as well as future state of good repair. However, the financial forecast is subject to significant risks relating to ongoing sales tax growth, successful receipt of grant funds, additional capital and operating needs, and higher than anticipated capital and operating costs. Should these risks occur, Metro will need to reassess our capital program and prioritize the funding of the many projects and programs in the LRTP.

This section of the LRTP financial forecast covers, in detail, the following.

> Revenue assumptions

- Local sales tax
- Other local revenue
- State revenue
- Federal revenue

> Expenditure assumptions (with funding plans for major projects)

- Bus program
- Rail program
- Highway program
- Multimodal program

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# Major Revenue Assumptions

Metro receives revenue primarily from four separate voter-approved local sales tax measures that are dedicated for transportation purposes. Three of the sales taxes have no sunset date, and provide an unprecedented level of local financial commitment towards the construction and ongoing operations and maintenance of the capital plan. Metro also expects to benefit from a significant amount of State grant funding and other assistance created by Senate Bill 1 (SB 1), which increased the gasoline and diesel excise tax and vehicle licensing fees in California, as well as ongoing federal support through longstanding discretionary and formula transportation grant programs.

The key revenue assumptions for the LRTP include the forecasted amount of sales tax and availability of future state and federal grant funding.

This financial forecast was developed before the COVID-19 pandemic and the long-term revenue impact from the pandemic on local sales tax, state SB 1, and fare revenue, as well as the impact of federal stimulus funding is still to be determined.

## Local Sales Tax Revenues

### Sales Tax Revenue Growth

There are four separate 0.5 percent transportation sales taxes in LA County – Proposition A, Proposition C, Measure R, and Measure M. The revenue that Metro receives is determined by the amount of taxable sales in the county. Forecasted taxable sales are obtained from the University of California at Los Angeles (UCLA) Anderson Forecast. Based on a moving average of the forecast released in 2017 through 2019, the average sales tax growth rate is 3.66 percent from FY21 to FY50. The starting point for the sales tax forecast is the FY20 budgeted amounts of \$873 million for each of the four countywide sales taxes.

### Proposition A Eligible Uses

A half-cent sales tax, passed by LA County voters in 1980, is to be used to improve public transit throughout LA County. A portion of the revenues is returned to local jurisdictions, based on population, for use on public transit projects. Revenues, after 5 percent is allocated to Metro for administration, are divided as follows:

USES	PERCENTAGE
Local Return Program	25%
Rail development and operations	35%
Discretionary (bus operations per Metro Board policy)	40%
<b>Total</b>	<b>100%</b>

All Proposition A discretionary funds (40%) are used for bus operations in accordance with established formulas.

### Proposition C Eligible Uses

A half-cent sales tax, passed by LA County voters in 1990, is to be used for public transit purposes in LA County. Revenues after 1.5 percent is allocated to Metro for administration, are divided as follows:

USES	PERCENTAGE
Rail and bus security	5%
Commuter rail/transit centers/park and ride	10%
Transit-related streets/state highways	25%
Local return (direct to cities and county)	20%
Discretionary	40%
<b>Total</b>	<b>100%</b>

The discretionary funds (40%) are assumed split among rail capital and operations and bus capital and operations. Allocations between bus and rail capital and operating requirements shift over time as capital projects are built and operations begin. These funds are also used for planned replacement and rehabilitation, of capital items including buses, facilities and rail cars.

Most of the transit-related highway funds (25%) are programmed for highway-related projects, such as carpool or high occupancy vehicle (HOV) lanes. These funds are also eligible for portions of transit projects that are on a state highway or freeway and for public mass transit improvements to railroad rights-of-way.

The Commuter Rail and transit funds (10%) are used for Metrolink commuter rail, debt service, and regional park-and-ride facilities and transit centers through the Call for Projects.

## The Act of 1998

Both Proposition A and Proposition C sales tax are not eligible for expenditures on “new subway,” pursuant to the Act of 1998 that was approved by county voters. This includes spending on the planning, design, construction, operation, and debt service for new subway.

## Measure R Eligible Uses

A half-cent sales tax effective July 1, 2010, passed by LA County voters in 2008, is used for projects and programs as specified in the Measure R Expenditure Plan. This sales tax has a sunset date of June 30, 2039. Revenues, after 1.5 percent is allocated to Metro for administration, are divided as follows:

USES	PERCENTAGE
New Rail and/or Bus Rapid Transit Capital	35%
Metrolink Capital Improvements within LA County	3%
Metro Rail Capital System Improvements	2%
Highway Capital	20%
Local Return	15%
Rail Operations	5%
Bus Operations	20%
<b>Total</b>	<b>100%</b>

## Measure M Eligible Uses

A half-cent sales tax effective July 1, 2017, which increases to a one-cent sales tax on July 1, 2039, was passed by LA County voters in 2016, and is used for the 91 projects and programs identified in the Measure M Expenditure Plan. Revenues, after 0.5 percent is allocated to Metro for administration, are divided as follows:

USES	PERCENTAGE
Rail Operations	5%
Bus Operations	20%
Paratransit Operations; Fare Discounts	2%
Transit Construction	35%
Metro State of Good Repair	2%
Highway Capital	17%
Active Transportation	2%
Local Return	16%
Regional Rail	1%
<b>Total</b>	<b>100%</b>

The capital percentage allocations or subfunds, can only be used for capital, and the operations subfunds only for transit operations.

## Transportation Development Act (TDA Article 4)

Transportation Development Act (TDA) revenues are derived from one-quarter cent of the 7.25 percent statewide base retail sales tax. The funds are apportioned to each county by the State Board of Equalization according to the amount of tax collected in the county. Each year, the actual funds are allocated according to the Metro Transit Fund Allocations. Generally Metro receives approximately 74 percent and the Municipal Operators receive 26 percent of the county allocation. TDA Article 4 funds are available for bus and rail capital and operations.

## Other Local Revenues

### Fare Revenues

The financial forecast includes bus and rail fare revenues, initially equal to the budgeted amount in FY20. The projected fare revenues increase steadily over time to achieve a “fare recovery ratio” (fare revenue divided by transit operations and maintenance costs) of approximately 30 percent by FY50.

This key assumption may entail a combination of strategies such as reducing unproductive service, achieving operating efficiencies, reducing costs, and increasing fares and other operating revenues. The number of riders anticipated on the Metro system has declined over the last several years and has led to a historical low fare recovery ratio.

### Local Agency Contributions

The Measure M Ordinance specifies that each city that has a Measure M transit station located in its boundaries shall pay 3 percent of the project costs, depending on the number of stations within the city (or unincorporated county). The financial forecast includes a 3 percent local agency contribution as a source of funding for all Measure M rail transit projects.

### Lease and Advertising Revenues

Metro receives funding from land leases on Metro-owned property, advertising on Metro property, and advertising on Metro vehicles. Lease and advertising revenues total \$40.5 million in FY20 and are projected to increase proportionally with inflation over the timeframe of the financial forecast.

### Toll Revenues

Metro operates ExpressLanes on both I-10 and I-110, which generate net income that is included in the financial forecast. Toll revenue from future ExpressLanes on I-105 and I-405 Sepulveda Pass, are used to pay for the costs of the respective ExpressLane.

## Bonds/Debt Financing

**Sales Tax Bonds** – Debt financing is needed for the timely completion of scheduled major capital construction projects when annual sales tax receipts and fund balance are not sufficient to support annual expenditures. The bonds proposed are for planning purposes to assist in making long-range financial decisions and will be issued when needed to fund transit and highway capital projects. The financial forecast assumes that 4.5 percent interest on 30-year bonds.

At the time of actual need, bond issuances will be analyzed individually and approved by separate Metro Board action.

**Grant Revenue Bonds** – Metro has received federal New Starts grants for the Regional Connector and Westside Subway Extension projects, and anticipates future New Starts funding for additional rail projects. The grant funding is paid to Metro over time and a portion will be paid after completion of the projects. Borrowing is needed to provide funding during construction. The financial forecast assumes grant revenue bonds are used for some of the New Starts projects. The bonds are paid solely from the New Starts receipts.

**Toll Revenue Bonds** – The Measure M Expenditure Plan includes 2 new ExpressLanes on I-105 and I-405 through the Sepulveda Pass. Toll revenue bonds secured by the ExpressLanes revenue are included in the financial forecast for these projects. Future toll revenue bonds will explore use of system toll revenues, as opposed to corridor-specific revenues.

The total amount of debt to be issued in the financial forecast through FY49, by type of debt and by decade, is as follows (in millions\$):

TYPE OF DEBT FINANCING	'20-'29	'30-'39	'40-'49	'50-'57
Proposition A	\$810	\$495	\$910	-
Proposition C	\$1,489	\$1,821	\$680	\$6,609
Measure R	\$2,828	\$1,259	-	-
Measure M	\$6,710	\$4,697	\$3,308	\$12,681
Grant Revenue	\$1,727	-	-	-
<b>Total</b>	<b>\$268</b>	<b>-</b>	<b>-</b>	<b>-</b>

**Debt Policy** – Metro maintains a Debt Policy that identifies the types of debt that Metro will issue and places caps on the amount of sales tax that can be used to pay debt service. The financial forecast conforms to the Debt Policy, including the percentage maximums per sales tax category, as follows:

SALES TAX CATEGORY	DEBT POLICY PERCENTAGE MAX.	FINANCIAL FORECAST MAX.
Proposition A Rail 35%	87%	56%
Proposition C Transit-Related Streets 25%	60%	58%
Proposition C Discretionary 40%	40%	38%
Measure R Transit 35%	87%	85%
Measure R Highway 20%	60%	59%
Measure M Transit 35%	87%	84%
Measure M Highway 17%	87%	61%



## State Revenues

The financial forecast includes all state revenues that Metro currently receives and expects to receive, with the assumption the funding program will continue to exist over the time horizon of the LRTP. A brief description of the major state revenues is provided.

### Active Transportation Program (ATP)

This is a state grant program for projects, both infrastructure and non-infrastructure, that further ATP goals. Funding for the program was increased through SB 1 (as discussed see herein). Metro and all cities in the county are eligible to apply. Metro expects to receive a portion of the regional funding for highly competitive projects like the Los Angeles River Bikeway.

### Low Carbon Transit Operations Program (LCTOP)

This program is funded from five percent of cap-and-trade auction proceeds and is intended for projects that increase transit mode share, replace conventional vehicles with electric zero emissions vehicle projects, support new or expanded bus or rail services, and expand intermodal transit facilities, equipment acquisition, fueling, and maintenance and other costs to operate the above services or facilities. Metro expects to receive about \$30 million per year from this program primarily for funding rail operations.

## Regional Improvement Program (RIP) Funds

The Regional Improvement Program (RIP) is part of the State Transportation Improvement Program (STIP). The STIP is divided 75 percent by county shares, the RIP, and 25 percent for interregional statewide shares. The 75 percent RIP share allows Metro to select projects for funding upon approval by the CTC. Metro uses its Long and Short Range Transportation Plans to select the projects to receive such funding and be programmed in the STIP. The Metro Board approves the programming of the RIP share for capital improvements to eligible highway, bus, rail, fixed guideway, and other capital projects.

The financial forecast incorporates the RIP awards from the 2018 and 2020 STIP. The biennial STIP adds two new years of programming. The financial forecast assumes \$120 million per year will be available for Metro from the RIP, beyond the expected 2020 STIP awards. The RIP is allocated to projects including: East SF Valley Transit Corridor Project, Sepulveda Pass Transit Corridor (Ph 2), SR-710 North, I-5 and I-405 Carpool Lane Connector, and Retrofit Soundwalls Phase 1.

### Senate Bill (SB 1)

SB 1 was signed into law on April 28, 2017 and contains new revenues to make road safety improvements, repair local streets, expand public transit, improve highways, and build bridges and overpasses. SB 1 provides \$5.4 billion per year over the next decade to fund transportation improvements through increases in the state excise tax on gasoline and diesel fuel, sales tax on diesel fuel, and vehicle registration fees.

The major funding programs under SB 1 are:

- > **Local Partnership Program (LPP)** – The LPP provides local and regional agencies that have passed sales tax measures, tolls, or fees or that have imposed fees which are dedicated solely to transportation improvements with a continuous appropriation of \$200 million annually (statewide) to fund road maintenance and rehabilitation, sound walls, and other transportation improvement projects. There is a competitive and formulaic portion, and Metro expects to receive about \$60 million per year from both. Projects to be funded in the financial forecast include bus replacements, Orange Line BRT Improvements, Division 20, I-5 and I-405 Carpool Lane Connector, and I-605 Corridor ‘Hot Spot’ Interchange Improvements.
- > **Solutions for Congested Corridors Program (SCCP)** – The SCCP provides funding to achieve a balanced set of transportation, environmental, and community access improvements to reduce congestion throughout the state. Metro expects to receive, on average, \$65 million per year in awards from this grant program for funding of projects including Airport Metro Connector, Sepulveda Pass Transit Corridor (Ph 2), and Gold Line Eastside Extension (one alignment).
- > **State of Good Repair (SB-1 SGR)** – These funds are to be made available for eligible transit maintenance, rehabilitation, and capital projects. The state distributes these funds using the State Transit Assistance Fund (STA) distribution formula and LA County subrecipients receive these funds through the annual Transit Fund Allocation process, after submittal of the required project list.
- > **Trade Corridor Enhancement Program (TCEP)** – TCEP provides funding for infrastructure improvements along corridors with high volumes of freight movement. Eligible projects will increase the use of on-dock rail, improve safety by eliminating at-grade crossings, reduce impacts to surrounding communities, reduce border wait times, and increase rail capacity with double tracking. Metro anticipates that as much as \$200 million per year, on average, could be available from this grant program. Projects receiving funds in the financial forecast include SR-57/SR-60 Interchange Improvements and I-710 South Corridor Project (Ph 1).

## State Transit Assistance (STA)

STA funds are derived from the State Public Transit Account, which is funded mostly from sales tax statewide on gasoline and diesel fuels. SB 1 provides an additional \$250 million per year to STA. This additional funding will go to transit capital projects and operational costs via current funding formulas based on agency revenue and population. Metro expects to receive about \$100 million per year from STA.

The regional STA allocation for LA County is based on the County’s shares of population and transit operator revenue compared to the rest of the state. The population portion of STA is used for Metro rail operations and the operator revenue share is used mostly for Metro and municipal operator bus operations.

## Transit and Intercity Rail Capital Program (TIRCP)

TIRCP was created to provide grants for capital improvements and operational investments that will modernize California’s transit systems and intercity, commuter, and urban rail systems to reduce emissions of greenhouse gases by reducing vehicle miles traveled throughout California. The program is funded from both cap-and-trade auction proceeds and SB 1 tax revenue. Metro expects to rely heavily on TIRCP with funding of as much as \$200 million per year, on average, for rail projects including West Santa Ana Transit Corridor, Green Line Extension to Crenshaw Blvd in Torrance, East SF Valley Transit Corridor Project, Sepulveda Pass Transit Corridor, Gold Line Eastside Extension, and Gold Line Foothill Extension to Claremont.

## Federal Revenues

The financial forecast includes all federal transportation funding that Metro currently receives and assumes the major funding programs will continue to exist through ongoing multiyear reauthorization bills. Metro expects that major capital funding sources like the federal New Starts program will continue to be a large funding component for our planned future rail lines.

### Congestion Mitigation and Air Quality (CMAQ)

The CMAQ program is designed to fund projects that contribute to attainment of national ambient air quality standards. CMAQ funds cannot be used to construct facilities providing additional capacity for single-occupancy vehicles. The financial forecast assumes that all new rail lines and various Metro bus rapid transit projects will receive CMAQ funding for operating costs during the first three years of operation. CMAQ will also be used for bus purchases, carpool lanes, and new rail projects. Metro estimates that, on average, \$130 million per year will be available.

### Surface Transportation Block Grant Program (STBGP)

STBGP funds are appropriated by Congress for highway improvements but are flexible and eligible for transit capital projects, Transportation Demand Management (TDM), and improvements to highways and arterial roads. Half of the STBGP allocation to the state is assumed to go to the California State Highway Account with the remainder allocated to the regions by formula in accordance with Section 182.6 of the California Streets and Highways Code. Most of Metro's regional share of STBGP funding is assumed for paratransit uses by Access Services. Some STBGP funds have been assumed for carpool lanes and freeway gap closures/arterial widening in LA County. On average, \$140 million per year is estimated available from this program.

### Section 5307 Urbanized Formula

Federal funding from FTA's Section 5307 Program is determined by federal and Southern California Association of Governments (SCAG) formulas. The funding assumed in Metro's financial forecast is equal to the actual allocation to Metro, with future estimates increased by 1.0 percent per year. Federal regulations allow Section 5307 funds to be used for preventive maintenance costs as well as capital costs. The financial forecast assumes the continued use of these funds for eligible bus preventive maintenance costs in the operating budget and for future bus replacements.

The forecast also assumes that these funds will be allocated to all eligible bus operators by formula for identified capital requirements, pursuant to the current Transit Fund Allocation (85 percent by formula and 15 percent discretionary).

### Section 5309 New Starts and Small Starts

Metro has received a significant amount of funding from the federal New Starts program, with funding of almost \$400 million per year (through FY22) for Westside Subway Extension Segment 1, Segment 2, and the Regional Connector. Metro will apply for future rail projects based on their estimated competitiveness. This could include West Santa Ana Branch and Sepulveda Transit Corridor.

No future funds have been assumed from the discretionary Small Starts, Expedited Project Delivery pilot, or Core Capacity program.

## Section 5339 Bus and Bus Facilities

Federal funding from FTA's Section 5339 Program totals \$65.5 million. Each state receives \$1.25 million, each territory receives \$500,000 and the remaining funding is allocated based on a formula that includes population, transit vehicles revenue miles, and transit passenger miles. The financial forecast includes \$27 million of formula funds in FY20, growing at 1.0 percent per year. Metro was awarded funding from the discretionary component of this program but no future discretionary funding is assumed. Formula funds are applied to bus midlife costs and future bus facility state of good repair.

## Section 5340 Growing States and High-Density Formula

Half of the funds are made available under the Growing States factors and are apportioned based on state population forecasts for 15 years beyond the most recent census. Metro expects to receive \$9 million in FY20, increasing approximately 1.0 percent per year. The funding is allocated for Metro rail operations in the financial forecast.

## Build America Bureau's Transportation Infrastructure Finance and Innovation Act (TIFIA)

Federal resources to stimulate capital market investment for developing transportation infrastructure by providing credit assistance in the form of direct loans or loan guarantees to projects of national or regional significance. Metro has participated in this program since FY12 on various rail corridors.

# Revenue Assumptions

## Bus Program

The major bus program assumptions include: level of bus and rail service, cost per service hour, fleet replacement schedule, and future cost per vehicle. The projected level of service is multiplied by cost per service hour, and projected fleet purchases are multiplied by the cost per vehicle. The financial forecast does not reflect any changes related to the NextGen Bus Plan and includes only the cost of replacing the Metro CNG bus fleet, as an implementation plan for a zero emission bus fleet has not yet been determined.

## Bus Capital

**Major Metro Rapid Bus Projects** – Measure M includes several bus rapid transit (BRT) and potential BRT projects. Funding plans for five BRT projects in the financial forecast are provided, in year of expenditure dollars, in the table below.

PROJECT	AMOUNT OF FUNDING BY SOURCE (MILLIONS)			
	LOCAL FUNDS	STATE FUNDS	FEDERAL FUNDS	TOTAL COST
BRT Connector Orange-Red Line to Gold Line	\$265.1	\$50.0	-	\$315.1
Lincoln Blvd BRT	\$220.3	-	-	\$220.3
North San Fernando Valley Bus Rapid Transit Improvements	\$206.5	-	-	\$206.5
Orange Line BRT Improvements	\$247.9	\$75.0	\$3,308	\$322.9
Vermont Transit Corridor	\$201.4	\$267.6	\$55.0	\$524.0

## Bus Operations

**New Buses and Added Service** – The financial forecast estimate is for planning purposes only and does not commit Metro to any specific expenditure level or continuation of the service if restructured. The financial forecast does not incorporate any potential modifications to bus service resulting from the NextGen Bus Plan initiative.

**Metro Bus Operations** – Operations and maintenance cost projections are based on the Metro FY20 budget cost per service hour and revenue service hours projected by Metro Operations. The cost per service hour increases approximately 2 percent per year. Revenue service hours remain relatively flat from a low of 7,030,361 to high of 7,308,639 by FY49. Total bus operating costs increase from \$1,268.6 million in FY20 to \$2,465.7 million in FY50.

**Access Services, Incorporated (ASI)** – The LRTP funds complementary parallel transit services required by the Americans with Disabilities Act (ADA) at the Metro subsidy consistent with the FY20 budget plus inflation. In order for Metro to meet its share of cost growth for mandated parallel ADA services that exceed inflation, a combination of revenue increases or transit operating cost reductions will be necessary. The forecast assumes that Surface Transportation Block Grant Program (STBGP) funds will continue to be programmed for ASI. Proposition C 40 percent is also programmed to match the FTA funds.



# Rail Program Assumptions

## Rail Capital

**Near-Term Transit Corridor Projects** – Over the first ten years of the LRTP, nine transit projects may be under construction. Descriptions for each of the projects are included below. The funding sources shown are those assumed in the LRTP but may change upon future Board programming actions. All funding and cost is shown in year of expenditure dollars. The estimated opening dates are based on awarded construction contracts or most recent Metro estimate, including the preliminary start dates in the Measure M Expenditure Plan.

1. **Crenshaw/LAX Transit Corridor (scheduled to open FY21)** – The capital costs and life of project budget as of spring 2020 for the light rail line is \$2,058.0 million.
2. **Regional Connector (scheduled to open FY22)** – The estimated capital cost and current life of project budget is \$1,755.8 million. This project is funded with a New Starts grant and TIFIA loan.

### D Line (Westside/Purple) Extension

3. **Segment 1 (scheduled to open FY24)** – The estimated capital cost and life of project budget as of spring 2020 is \$2,778.9 million. With grant revenue bond debt service, the cost is \$3,363.9. This project is funded with a New Starts grant and TIFIA loan.
4. **Segment 2 (scheduled to open FY26)** – The estimated capital cost and life of project budget as of spring 2020 is \$2,441.0 million. This project is funded with a New Starts grant and TIFIA loan.
5. **Segment 3 (scheduled to open FY27)** – The estimated capital cost and life of project budget as of spring 2020 is \$3,223.6 million. With grant revenue bond debt service, the cost is \$3,911.4. This project is funded with a New Starts grant.
6. **East SF Valley Transit Corridor Project (scheduled to open FY27)** – The estimated capital cost is \$1,567.7 million.

7. **Gold Line Foothill Extension to Claremont (Phase 2B) (scheduled to open FY28)** – The estimated capital cost is \$1,573.9 million. This project is being designed and constructed through the Gold Line Foothill Construction Authority. Metro will fund the design and construction and take over as operator. The current scope and budget extends the project from Azusa to Pomona.
8. **West Santa Ana Branch Transit Corridor LRT FY28 (scheduled to open FY28)** – The estimated capital cost is \$1,250.2 million for the FY28 segment that was initially envisioned in the Measure M Expenditure Plan. However, Metro is currently planning to combine the FY28 project with portions of the FY41 projects.
9. **Green Line Extension to Crenshaw Blvd in Torrance (scheduled to open FY30)** – The estimated capital cost is \$1,166.8 million.

RAIL PROJECT	AMOUNT			
	LOCAL FUNDS	STATE FUNDS	FEDERAL FUNDS	TOTAL COST
Crenshaw/LAX Transit Corridor	\$1,656.5	\$287.0	\$114.5	\$2,058.0
Regional Connector	\$599.3	\$267.0	\$889.5	\$1,755.8
D Line (Purple) Extension Segment 1	\$1,574.9	\$2.6	\$1,786.4	\$3,363.9
D Line (Purple) Extension Segment 2	\$1,085.0	-	\$1,356.0	\$2,441.0
D Line (Purple) Extension Segment 3	\$1,906.1	\$31.8	\$1,973.4	\$3,911.4
East SF Valley Transit Corridor Project	\$1,158.8	\$407.9	\$1.0	\$1,567.7
Gold Line Foothill Extension to Claremont	\$1,283.7	\$290.2	-	\$1,573.9
West Santa Ana Branch Transit Corridor	\$922.5	\$323.9	\$3.8	\$1,250.2
C Line (Green) Extension to Torrance	\$935.4	\$231.3	-	\$1,166.8

## Rail Operations

Rail operations costs are based on the current cost per service hour (FY20), revenue service hour projections from Metro Operations, and estimated revenue service dates for future rail lines. The cost per service hour is escalated by the historical growth rate over the last five years. The future cost per service hour is reduced for estimated fixed administrative costs that are not expected to be incurred upon the opening of each new rail line.

**Metrolink Commuter Rail** – The Southern California Regional Rail Authority (SCRRA) Joint Powers Authority, or Metrolink, plans, constructs, and operates the five county commuter rail system. Metro funds the portion of the capital and operating costs for commuter rail lines and projects located within LA County. Metro also funds and manages additional commuter rail and related improvements. The financial forecast assumes continued funding for the current commuter rail system from Proposition C (10 percent) and Measure M (2 percent) commuter rail revenues.

**Other Rail Costs and System Improvements** – In addition to the costs associated with the construction of individual rail lines, costs to upgrade the overall rail system and for miscellaneous enhancements are included.

## Transit Asset Management

Metro maintains an inventory of its rail and bus vehicles, purchases replacements at the end of the useful life and performs midlife overhauls at periodic intervals. Metro has existing replacement and midlife contracts for much of its existing vehicle fleet, with allocated funding. The financial plan includes funding for all future vehicle replacements and midlife overhauls.

In FY 2020, approximately \$530 million was allocated to maintain Metro's bus, rail and technology infrastructure in a state of good repair, including bus replacements, and related technology, on-going bus maintenance midlife and engine replacement, rail vehicle procurement, and rail overhaul. Vehicle procurement costs and other facility, infrastructure, and vehicle procurements/maintenance costs are estimated based on the existing composition and age of the vehicle fleet. From FY21 to FY50, the financial forecast funds \$14.2 billion of total SGR expenditures for Metro rail and \$10.3 billion for bus.

**Vehicle Replacement Schedule** – Bus vehicle replacement is based on a 12-year bus cycle and rail vehicle replacement is based on a 30-year schedule.

**Vehicle Costs** – Total bus and rail vehicle costs are presented below. These costs assume replacements with alternative-fueled vehicles and are escalated annually by CPI starting in FY20. The costs are based on Metro's most recent procurements.

TYPE	AMOUNT
40-Foot Bus	\$693,338
60-Foot Bus	\$1,070,308
Heavy Rail Vehicle	\$4,978,716
Light Rail Vehicle	\$4,681,971

**Facilities and Support Equipment** – Costs for bus capital projects are based on Metro's Transit Asset Management database.

## Highway Program Assumptions

The highway component adds the estimated total escalated cost of all Measure R, Measure M, and other Board-approved highway projects and programs.

### Active Transportation

The financial forecast includes \$559.4 million for specific active transportation projects, in addition to those in the Measure M multi-year subregional programs. The projects are funded with a combination of Measure M funds and state active transportation grants.

### Freeway Carpool Lanes [High Occupancy Vehicle Lanes (HOV)]

The financial forecast provides for the implementation of HOV projects identified in the Measure R and Measure M Expenditure Plans. Project cost estimates are provided by Caltrans District 7 or Metro. Carpool lanes, not including ExpressLanes, and related project expenditures are \$1.5 billion (escalated) from FY20 to FY50.

### Freeway Gap Closures, Interchanges, and Arterial Widening

Project cost estimates were provided by Caltrans District 7 or Metro. These projects have total expenditures of \$16.2 billion (escalated) in the financial forecast.

### Freeway Service Patrol

Continued funding for this program is assumed primarily through Proposition C 25 percent, Freeway Service Patrol State Highway Account Funds, and HOV violation funds. The Proposition C 25 percent funding is assumed to grow annually by CPI.

## Intelligent Transportation System (ITS)

This program aims to efficiently utilize advanced technologies in Southern California's transportation systems. For the Regional Integration of the ITS, the financial forecast assumes an average of \$1.7 million of Proposition C 25 percent funds escalated by CPI.

## Local Streets and Roads

Estimated local funding through the State Gas Tax subventions, earmark exchange, use of surplus Measure R, and allocation of STBGP local funds of \$21.7 billion are assumed received by the County and the cities in LA County through FY50. The funding includes augmented gas tax funding from SB 1.

## Multi-year Subregional Programs

Highway eligible funding for the Measure M Multi-Year Subregional Programs totals \$6.9 billion escalated through FY57. The specific projects are and will be identified by the subregions, subject to Metro guidelines and Ordinance restrictions, which include active transportation, first-last mile, highway efficiency, and modal connectivity eligible projects.

## Operations, Caltrans

Estimated State Highway Account funds of \$8.0 billion are assumed for Caltrans District 7 operations.

## Retrofit Soundwalls

The Retrofit Soundwalls program encompasses freeways previously constructed without necessary soundwalls. This program has been a Metro responsibility since Senate Bill 45 took effect in 1998. The program has two phases: three priorities in Phase I and unprioritized projects in Phase II. Completion of Phase I totals \$459.2 million through FY40 funded with Proposition C 25 percent, Measure R, and RIP funds. Phase II, for soundwalls on freeways without carpool lanes and therefore not eligible for Proposition C 25 percent, are not funded in the financial forecast.

## Rideshare/Vanpool Program

Since FY03, Metro has directly operated countywide rideshare services with over 100,000 registrants currently. In May 2007, the Vanpool Program was added, providing lease and fare incentives to new and existing vanpools. Total funding of \$452.5 million (Proposition C 25 percent and RIP) is assumed through FY50.

## Service Authority for Freeway Emergencies (SAFE)

A separate legal entity that is housed within Metro, SAFE operates call boxes along the freeways, the #399 Mobile Call Box program, and the 511 Traveler Information System. It is funded by a \$1 surcharge on each of the seven million registered vehicles in the County. Cost estimates and assumptions are based on the SAFE Ten-Year Financial Plan and include capital requirements and operations and maintenance expenses.

## State Highway Operation and Protection Program (SHOPP)

Every four years, Caltrans prepares a SHOPP plan that identifies needed projects for maintenance and safety repairs. Caltrans administers this program and allocates funding throughout California as-needed. Funding for this program is significantly increased from SB 1 fuel taxes. An estimated amount allocated to LA County is assumed for reference and comparison to other counties.

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# Travel Demand Model, Assumptions, and Forecast

The development of the 2020 LRTP was preceded by a rigorous assessment of the analytical tools, assumptions, and performance criteria that would be employed in the evaluation of potential plan alternatives. The primary analysis tool is the Metro Travel Demand Simulation Model. This appendix provides a technical summary of the travel demand modeling process and performance measure analyses conducted as part of the 2020 LRTP development effort.

## Metro Model Overview

Travel demand modeling evaluates existing and future socioeconomic conditions, transportation networks, land-uses, and pricing data to estimate future travel patterns.

Key inputs include:

- > Demographic and socioeconomic data (population, households, income, auto ownership, and jobs)
- > Transportation network data (existing and approved roadway and transit projects)
- > Pricing data (transit fares and fuel costs, maintenance estimates, parking, tolls, etc.)

Key outputs include:

- > Trip generation (number of trips made)
- > Trip distribution (where those trips go)
- > Mode choices (how the trips will be divided among the available modes of travel)
- > Trip assignments of vehicle and transit trips (predicting the route trips will take)

Travel demand models can test “what-if” scenarios, based on variations of inputs, providing decision makers with the best predictions of how well a project may be utilized, how a project may be implemented, and what benefits and impacts a project may have on the rest of the transportation network, community, and environment.

Metro’s travel demand model includes the officially adopted Southern California Association of Governments (SCAG) forecasts of socioeconomic data. The Metro model also includes future transportation projects included and defined in Metro’s Long Range Transportation Plan and SCAG’s Regional Transportation Plan (RTP). Socioeconomic data forecasts are updated every four years by SCAG in cycle with the update of the RTP. These forecasts are developed by SCAG in coordination with local jurisdictions.

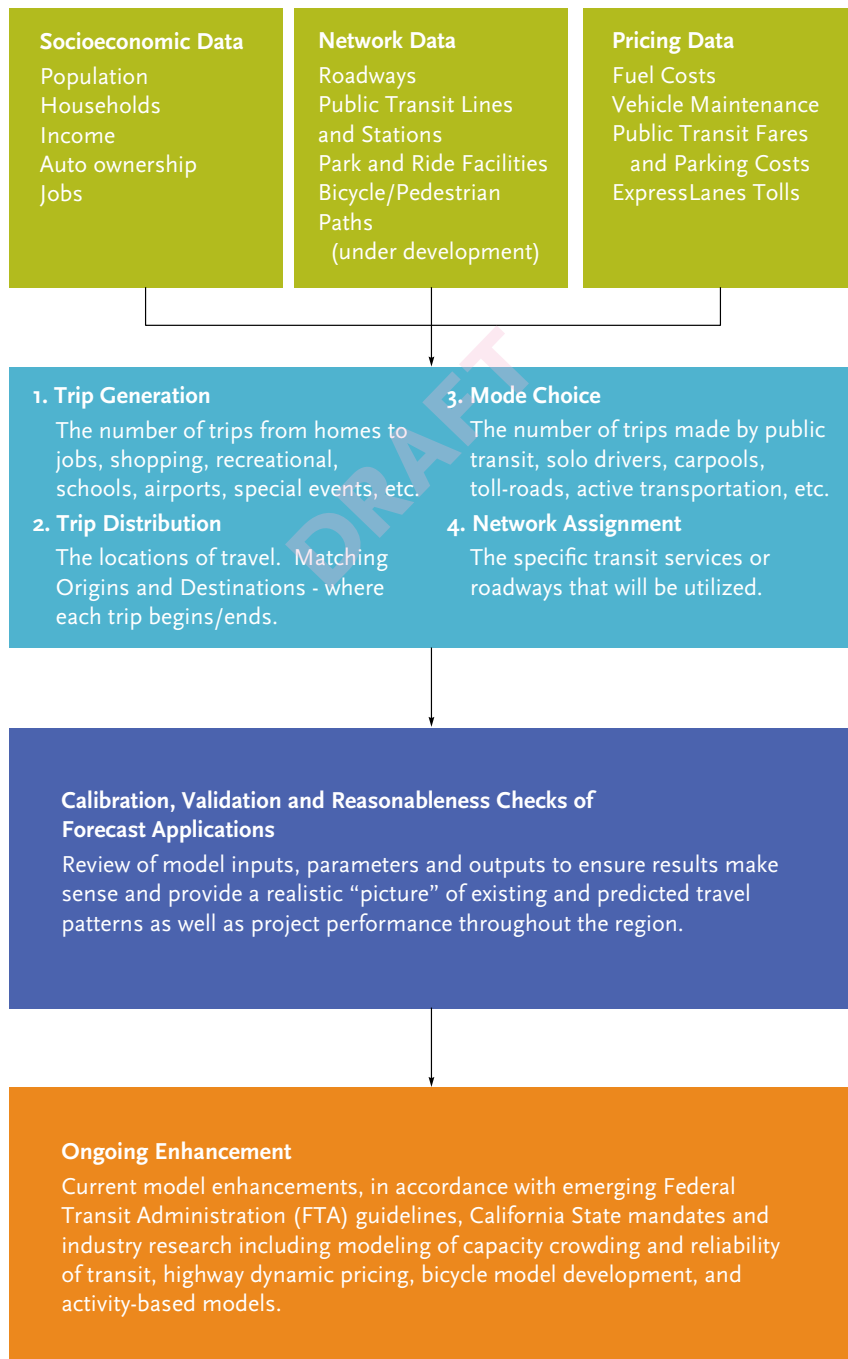
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# Travel Demand Model Components

The Metro travel demand modeling program components are illustrated in Figure 13.

Figure 13

## Travel Demand Model Components



# Model Structure and Key Details

The Metro Travel Demand Simulation Model uses the traditional four-step process generally employed by travel forecasting modelers throughout the United States. The four steps are trip generation, trip distribution, mode choice, and network assignment. Figure 14 is a conceptual representation of the four-step modeling process. The implementation of the travel demand modeling process is achieved through a series of 17 computer simulation modules. Figure 15 is a flowchart that illustrates the process.

Figure 14  
Travel Demand Modeling Process

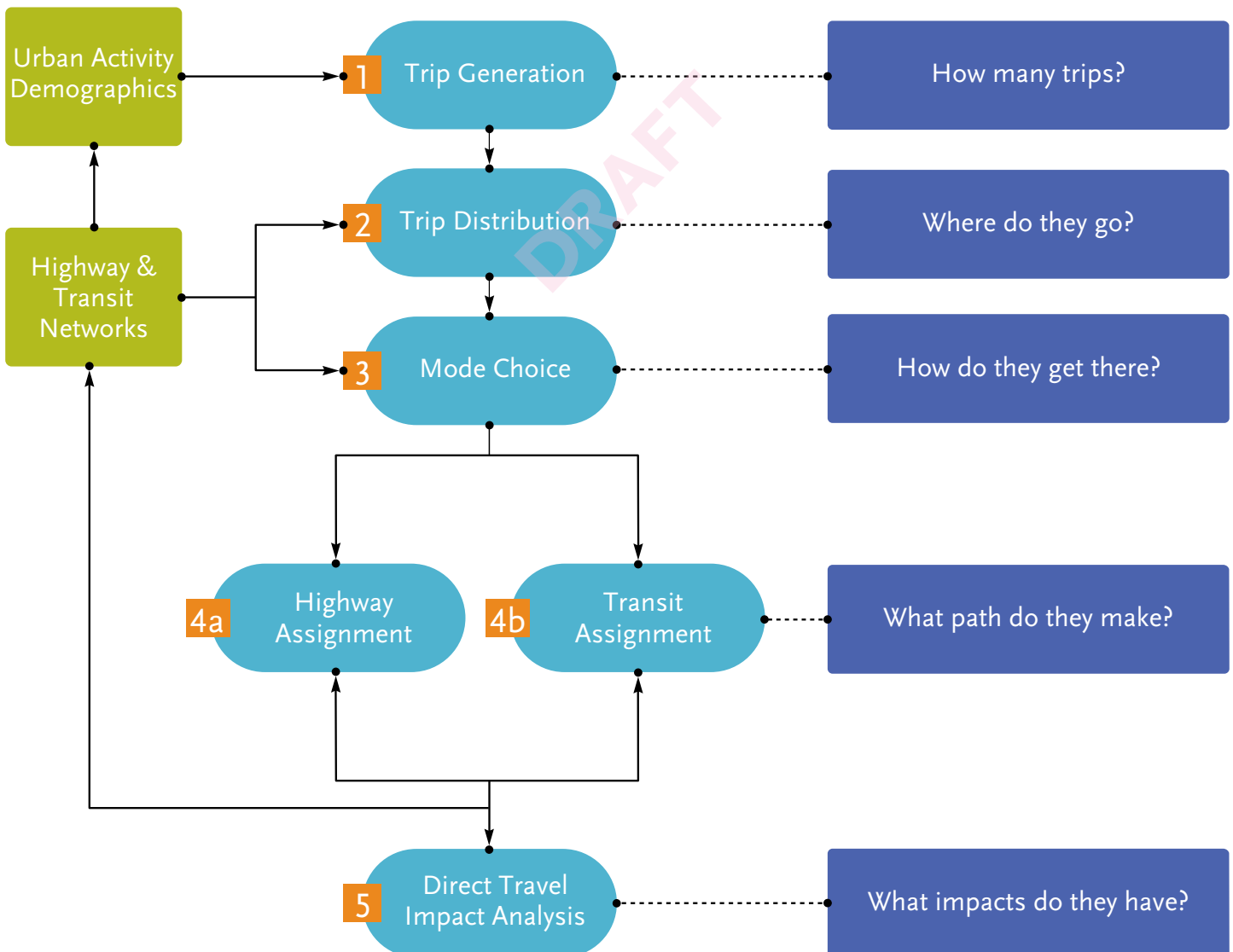
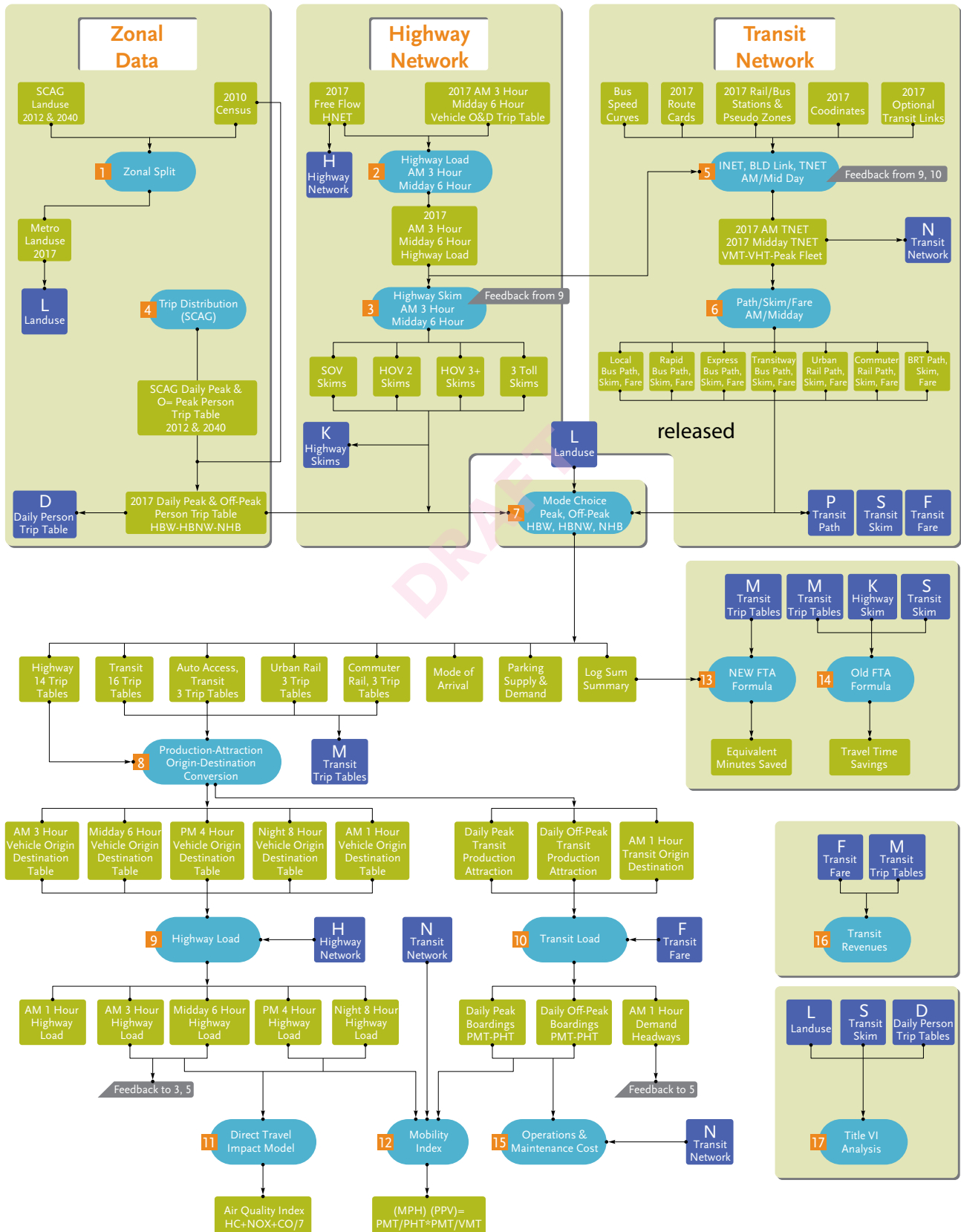


Figure 15

Metro Long Range Transportation Plan Base Year (2017) Model Flowchart





Each module has been calibrated from observed data, typically from a sample of household interviews from which detailed demographic and travel characteristics are collected through written questionnaires. The current Metro Travel Demand Simulation Model is the Year 2017 (Base Year) Model that was developed for the 2020 LRTP for LA County. The 2017 Model is the latest and most sophisticated evolution of the Metro Model originally developed in the early 1970s.

The trip generation component of the Metro Model is primarily based on the 1967, 1976, 1991, and 2011 home interview surveys for the Los Angeles metropolitan area that were conducted by the California Department of Transportation (Caltrans) and SCAG. The trip distribution and mode choice modules were updated using the 2010 Census, the Year 2010 Post-Census Regional Travel Survey, the 2011 On-Board Surveys on light-rail, heavy-rail and bus, and the 2010 On-Board Survey of commuter-rail patrons.

The 2017 Model was validated for its ability to replicate 2011 travel patterns and conditions using transit ridership statistics

and the survey data from which it was calibrated. The model performed within standard limits for all components including average trip length, mode shares, and comparisons of transit boardings.

For the 2020 LRTP, the 2017 Model has been updated to reflect 2017 as the base year and 2047 as the forecast year. The process includes updating the input socioeconomic data and the modification of highway and transit networks for the years 2017 and 2047.

For mobility and ridership analysis, fundamental spatial units are based on tracts of Census 2000 and 2010. The Metro modeling area is identical to the SCAG modeling area which encompasses six counties, namely Los Angeles, Orange, Riverside, San Bernardino, Ventura, and Imperial counties. It is illustrated in Figure 16. The area is represented by a total of 3,800 transportation analysis zones (TAZs), of which 3,017 are in the internal modeling area, 40 represent cordons, and 742 are pseudo zones. The 2,286 TAZs in LA County are aggregated into Metro's nine subregions.

Figure 16

## TRAVEL DEMAND MODEL AREA



# Model Assumptions

Each input to the Metro Model is a representation of the characteristics of the trip, the trip maker, or the transportation system. This information is usually employed at the census tract level but may include some distributions of characteristics within the census tract. All inputs for the 2017 validation used empirical data compiled from a variety of sources as described in Figure 17.

Figure 17

## Model Validation Data

MODEL COMPONENT	INPUT DATA	DATA SOURCE	OUTPUT DATA
Urban Activity	General Plans, Population, Employment, Licensed Drivers	Municipalities, Census Bureau, Bureau of Labor Statistics, Dept. of Economic Development	Population, Employment, household demographic data by Zone
Highway & Transit Networks	Highway facilities, Transit services	Caltrans, Municipalities, Transit Operators	Zone-to-zone travel time and cost by time period
Trip Generation	Population, employment, household demographics	Southern California Association of Governments	Trip productions and attractions by zone
Trip Distribution	Trip productions and attractions by Zone & Zone-to-zone travel time,	Southern California Association of Governments, Census Transportation Planning Products (CTPP) based on American Community Survey	Zone-to-zone trip volumes by purpose
Mode Choice	Zone-to-zone trip volumes, Zone-to-zone travel time, Zone demographic data, Parking costs, Fuel/auto operating costs, Transit fares	Trip Distribution Model, Transportation Networks, Urban Activity Model, Parking Posted Rate, Surveys Transit Operators	Zone-to-zone trips by purpose and mode of travel
Network Assignment	Transportation Networks, Zone-to-zone trips by purpose and mode	Transportation Networks, Mode Choice Model	Volumes on highway facilities and patronage on transit services

Projections for the planning horizon year 2047 were obtained from many of the same sources. The model then uses its econometric and behavioral formulations to project travel response and transportation system impacts under a variety of transportation system environments and conditions. However, there are several major assumptions that either reflect a continuation of existing trends or fall into the policy arena. If the future varies from these assumptions, the projected future year results will likely be different from those projected by the model. These assumptions are:

- > The growth and distribution in population, employment, income, and vehicle ownership will occur in accordance with the projection adopted by SCAG in 2016;
- > The per-mile vehicle operating cost will not change in constant dollars (i.e., changes in fuel prices and fuel economy offset one another but rise with inflation);
- > The model was calibrated utilizing the 2011 transit fare structure and updated during a model validation in 2017 with the 2017 fare structure in place at that time. The 2011 calibration made use of the 2011 on-board survey, and the model was validated to 2017 data;
- > Parking costs will rise with inflation and the location and application of parking costs will not change significantly from today (that is, the location of free versus pay parking, employer subsidies, etc.);
- > The need or distribution of travel will not change dramatically due to a major movement to a round-the-clock business day or a major displacement of work trips by telecommuting; and,
- > The current highway and transit levels-of-service will not change dramatically from today (except for planned system improvements and the projected congestion effects) due to potential large-scale Intelligent Transportation System implementation.

# Alternatives Modeled

Four primary model runs were conducted for the L RTP. These include:

1. 2017 Base (and Validation Year) – the Existing Conditions Model Network;
2. No Build (2047) – the Trend Model Network which includes the 2047 demand on the base condition (2017), assuming implementation of no further projects;
3. Measure M (2047) – the 2047 demand on the Measure M Expenditure Plan transportation system;
4. 2020 Plan (2047) – the 2020 L RTP includes all major transit and highway projects with committed funding or partially committed funding, existing programs and policies, collaboration with our partners, and new policies and initiatives to achieve our regional goals.

The L RTP maximizes these benefits through the addition of expanded programs, such as ExpressLanes, off-peak transit services and active transportation network expansion; partnerships to enhance transit, active travel, goods movement, and community development; and bold policies, such as reduced transit fares, a reimagined bus system and congestion pricing.

The highway and transit projects that comprise the Measure M Expenditure plan (Measure M) model run are summarized in Figure 18 and Figure 20 and illustrated in Figure 19 and Figure 21.

Figure 18  
Expenditure Plan Transit Projects

LABEL	DESCRIPTION/LIMITS
1	Airport Metro Connector 96th St. Station
2	Westside Purple Line Extension Section 3
5	Gold Line Foothill Extension to Claremont
6	Orange Line BRT Improvements
7	BRT Connector Orange/Red to Gold Line
9	East San Fernando Valley Transit Corridor Project
10	West Santa Ana Transit Corridor LRT
11	Crenshaw/LAX Track Enhancement Project
17	Vermont Transit Corridor
19	Green Line Extension to Crenshaw Blvd in Torrance
22	Sepulveda Pass Transit Corridor (Phase 2 )
24	Gold Line Eastside Extension (One Alignment)
30	Crenshaw Northern Extension
35	Lincoln Blvd BRT
36	*Green Line Eastern Extension (Norwalk)
40	*Sepulveda Pass Westwood to LAX (Phase 3)
41	*Orange Line Conversion to Light Rail
44	*Gold Line Eastside Extension (Second Alignment)

Notes: \*= Measure M project, to be completed after 2047





Figure 20

## Expenditure Plan Highway Projects

LABEL	DESCRIPTION/LIMITS
3	High Desert Multi-Purpose Corridor
4	I-5 North Capitol Enhancements (SR-14 to Lake Hughes Rd)
12	SR-71 Gap from I-10 to Rio Rancho Rd
15	Sepulveda Pass Transit Corridor
18	SR-57/SR-60 Interchange Improvements
20	I-710 South Corridor Project
21	I-105 Express Lane from I-405 to I-605
29	I-5 Corridor Improvements (I-605 to I-710)
32	I-405/I-110 Interchange HOV Connection Ramps and Interchange Improvements
33	I-605/I-10 Interchange
34	SR-60/I-605 Interchange HOV Direct Connectors
37	I-405 South Bay Curve Improvements
61	*I-605 Corridor "Hot Spot" Interchange Improvements
	Hot3+ Projects Not Funded by Measure M
1	I-110 from SR-91 to I-405
2	I-10 from I-605 to Los Angeles/San Bernardino County Line
3	I-405 from I-101 to Los Angeles/Orange County Line
4	I-605 from I-10 to Los Angeles/Orange County Line

Notes: \*= Measure M project, to be completed after 2047

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Figure 21  
**2020 PLAN HIGHWAY PROJECTS MAP**



# Model Inputs

The basic inputs to a travel demand simulation model include socioeconomic data and the transportation networks (both highway and transit). This section describes the socioeconomic data and the network information used in the Model for the 2020 LRTP development.

## Transportation Networks

The transportation networks in the 2017 Model were updated from the 2011 conditions (calibration year) to 2017 conditions (validation year). Networks representing year 2047 with 2020 LRTP Improvements were also developed.

## 2017 Base Year Conditions

Figure 22 depicts the highway links included in the computer network file representing the year 2017 highway network. The network consists of 21,361 nodes and 66,739 links. They cover all freeways as well as major, primary and secondary arterials within the five-county modeling area.

Highway free-flow speed, lane capacities, and volume-delay functions vary by facility types and area types and are assumed as presented in Figure 23.

Figure 22

### Highway Free Flow Speeds and Lane Capacities

	FREE-FLOW SPEED				LANE CAPACITY			
	FREEWAYS	MAJOR ARTERIAL	PRIMARY	SECONDARY	FREEWAYS	MAJOR ARTERIAL	PRIMARY	SECONDARY
CBD	72	20	20	20	1950	625	575	500
Urban	72	30	30	25	1950	650	600	525
Suburban	72	35	35	30	1950	675	625	550
Mountain	72	40	40	35	1950	800	800	800
Rural	72	50	50	50	1950	900	900	900

### Volume-Delay function

$$\begin{aligned}
 \text{(Time in traffic)} &= \text{(Free-flow Time)} + \text{(Delays)} \\
 &= \text{(Free-flow time)} * \{1 + \alpha * [(\text{Volume}/\text{Capacity})^\beta]\}, \\
 (\alpha, \beta) &= (1.16, 4.33) \text{ for freeways and } (0.15, 5) \text{ for arterials.}
 \end{aligned}$$



A summary of the 2017 highway network by facility type for each subregion is provided in Figure 24. Countywide, a total of 22,500 lane-miles of roadway are represented in the network. Among them, 5,100 lane-miles, or 23 percent are freeway. The San Gabriel Valley subregion has the highest amount of freeway lane-miles while the Gateway Cities subregion has the highest concentration of arterial facilities.

Figure 24

**Summary of Highway Lane-Miles by Facility Type and Subregion in LA County (2017 – 2047)**

SUBREGION	2017			2047		
	FREEWAY	ARTERIAL	TOTAL	FREEWAY	ARTERIAL	TOTAL
Arroyo Verdugo	301	751	1,052	312	751	1,063
Central Los Angeles	704	2,239	2,944	708	2,239	2,947
Gateway Cities	786	2,953	3,738	912	2,953	3,965
Las Virgines/Malibu	92	351	443	92	351	443
North LA County	731	2,828	3,558	842	2,863	3,706
San Fernando Valley	801	2,386	3,188	817	2,386	3,706
San Gabriel Valley	1,052	2,467	3,519	1,076	2,467	3,544
Southbay Cities	384	1,973	2,358	423	1,973	2,396
Westside	240	1,028	1,269	254	1,028	1,282
<b>Total</b>	<b>5,092</b>	<b>16,976</b>	<b>22,068</b>	<b>5,437</b>	<b>17,012</b>	<b>22,449</b>

SUBREGION	2017			2047		
	FREEWAY	ARTERIAL	TOTAL	FREEWAY	ARTERIAL	TOTAL
Los Angeles	5,092	16,976	22,068	5,437	17,012	22,449
Orange	1,789	4,712	6,501	1,798	4,712	6,510
Riverside	2,072	4,695	6,767	2,072	4,695	6,767
San Bernardino	2,589	6,590	9,179	2,589	6,590	9,179
Ventura	497	1,747	2,243	497	1,747	2,243
Imperial	420	944	1,363	420	944	1,363
<b>Total</b>	<b>12,458</b>	<b>35,664</b>	<b>48,122</b>	<b>12,813</b>	<b>35,699</b>	<b>48,512</b>



Transit networks are coded in accordance with highway networks. The modal designations include: Metrolink 10, Metro urban rail 13, Metro buses (bus rapid transit 26, rapid bus 24, transitway 25, express bus 12, local bus 11) and various municipal operators 14-23. The non-transit modal designations are sidewalk transfer walk 1, walk access 2, walk egress 3, driving/walk time inside Park-and-ride station 5, bicycle access 6 and bicycle egress 7.

In 2017, transit service was coded in the computer model's network to reflect the conditions existing at that time. In LA County this included approximately 554,000 route-miles of bus service (Metro and municipalities), 21,200 route-miles of Metro Rail service, and 8,500 route-miles of commuter rail (Metrolink) service in the region.

## 2020 Plan (2047 Future Year)

The 2020 Plan includes highway and transit improvement projects listed above in Figure 18 and Figure 20. These projects are assumed to be completed by 2047. The 2017 Base Year highway network and transit network were modified to reflect the completion of these projects.

The highway projects included in the 2020 Plan will add 345 lane-miles of freeways and 35 lane-miles of new/upgraded arterials. Combined, they represent a seven percent increase in freeway lane-miles and 0.2 percent increase in arterial lane-miles in LA County.

In addition, the 2020 Plan will add substantial transit infrastructure to the network. The 2047 transit service was coded in the model networks to reflect the future planned transit network. In LA County, this includes approximately 563,000 route-miles of bus service, 50,500 route-miles of Metro Rail service, and 8,500 route-miles of commuter rail service in the region. These increases over 2017 represent additional lines as well as increased service on existing lines.

## Socioeconomic Forecast

The socioeconomic input data to the Metro model are consistent with the SCAG forecast. The latest official forecast released by SCAG is the "2016 RTP" version, used to develop the 2016 RTP adopted by the Regional Council. Population and employment are the main socioeconomic inputs to a travel demand model. For the LRTP, population and employment estimates by TAZ for 2011, 2017, and 2047 were derived from the population and employment data contained in SCAG's 2016 RTP.

## Population Forecasts

The analysis of population growth was conducted regionally by county and at a subregional level for LA County. Figure 25 shows that LA County's population is forecast to grow by 17 percent from approximately 10.2 million in 2017 to 11.9 million in 2047. The six-county region's population is forecasted to grow by 21 percent during the same period, from 18.8 million in 2017 to 22.8 million in 2047. LA County's share of the regional population is estimated to slightly decrease from 54 percent in 2017 to 52 percent in 2047.

Population growth trends by subregion within LA County are depicted in Figure 26. Gateway Cities was the most populous subregion in the county with 2 million in 2017. In 2047, Central Los Angeles is expected to become the most populous subregion with 2.5 million residents forecasted. North Los Angeles County is expected to experience the highest rate of population growth, growing from 0.7 million in 2017 to 1.1 million in 2047, a growth of 49 percent.

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Figure 25

**Population Growth by County (2017 – 2047)**

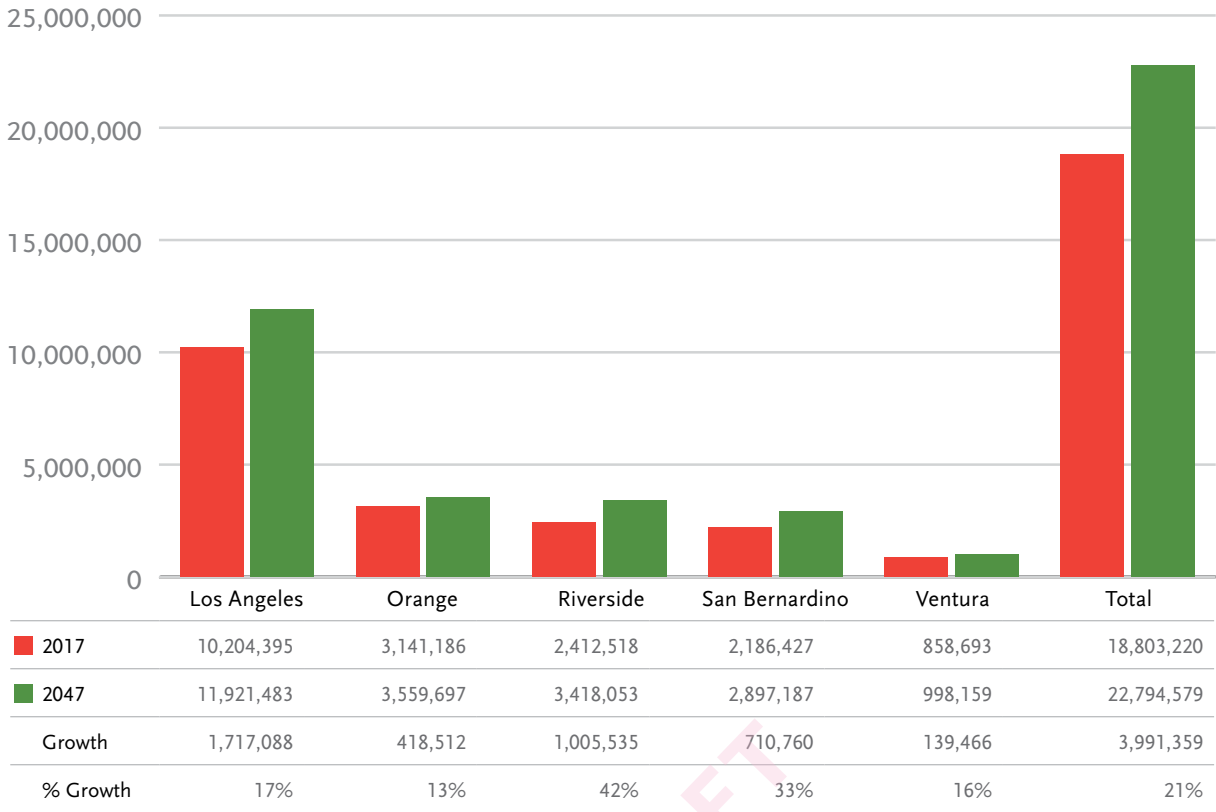


Figure 26

**Population Growth by Subregion (2017 – 2047)**



## Employment Forecasts

Figure 27 shows that LA County employment is expected to grow by 24 percent from 4.4 million in 2017 to 5.5 million in 2047. The region's employment is expected to grow by 33 percent during that period, from 7.8 million in 2017 to 10.3 million in 2047. LA County's share of the regional employment is estimated to decrease from 57 percent in 2017 to 53 percent in 2047.

Figure 28 depicts employment growth in the subregions in LA County. In 2017, the Central Los Angeles subregion had the highest employment with 790,000 jobs. In 2047, Central Los Angeles is expected to continue to have the most employment with 1.05 million jobs. North Los Angeles County is expected to experience the highest rate of job growth, growing by 53 percent from 2017 to 2047.

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Figure 27

**Employment Growth by County (2017 – 2047)**

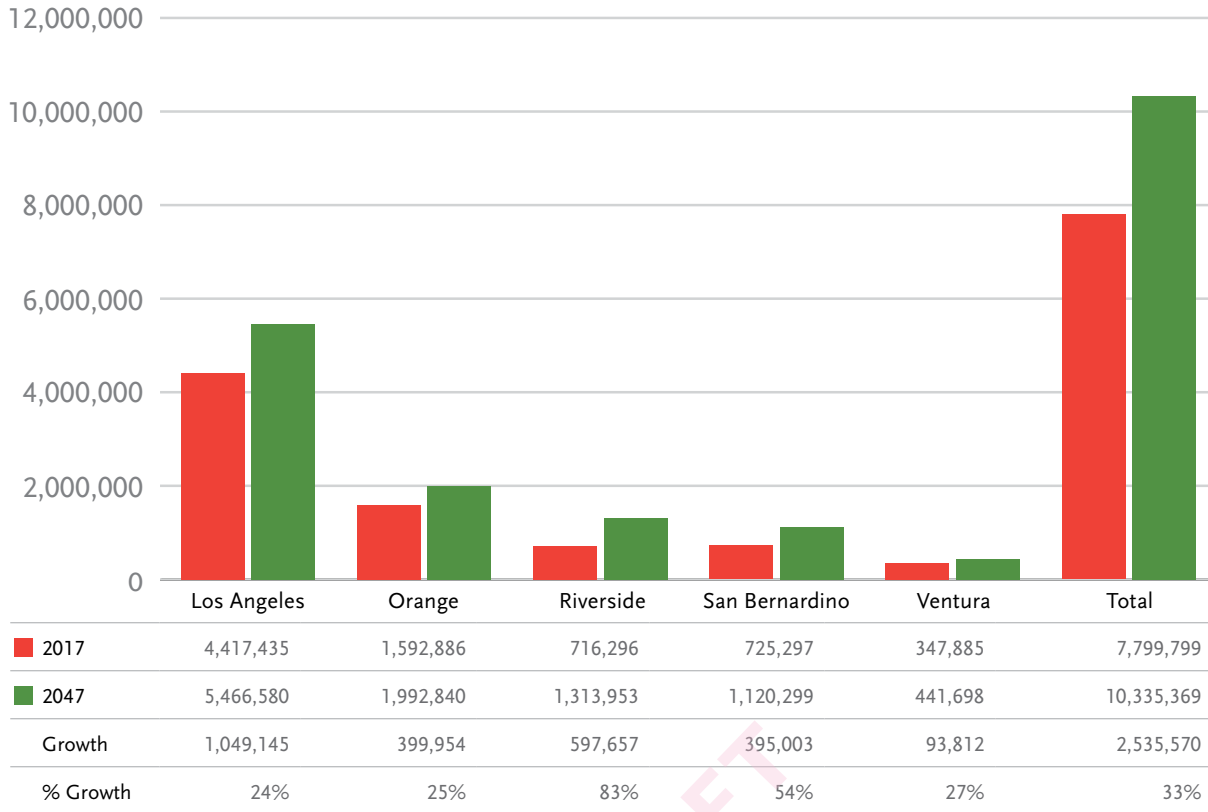


Figure 28

**Employment Growth by Subregion (2017 – 2047)**





# Model Outputs

The basic outputs from a travel demand simulation model include trip productions and attractions, trip tables between TAZs, trip tables by mode, and trip assignments. This section describes the outputs of the Model for the 2020 LRTP.

## Trip Generation

Trip generation is the process of estimating how many daily person trips are generated by households within each TAZ. SCAG's trip generation model generates trips for the following thirteen (13) purposes:

1. Home-Based Work Direct – Low-Income
2. Home-Based Work Direct – Middle-Income
3. Home-Based Work Direct – High-Income
4. Home-Based Work Strategic – Low-Income
5. Home-Based Work Strategic – Middle-Income
6. Home-Based Work Strategic – High-Income
7. Home-Based School
8. Home-Based University
9. Home-Based Shop
10. Home-Based Social/Recreation
11. Home-Based Other
12. Work-Based Other
13. Other-Based Other

Using the population and employment estimates for 2017 and 2047 as input, SCAG's trip production model and trip attraction model are applied to estimate the trips produced from and trips attracted to each TAZ.

## Trip Productions

The results of trip production are summarized in Figure 29. Figure 29 shows that productions in LA County are expected to grow from 35.4 million in 2017 to 40.8 million in 2047, a growth of 15 percent. Riverside County is expected to experience the highest growth rate, at 48 percent while Los Angeles and Orange County have the lowest growth rates. Figure 30 illustrates the growth by subregions in LA County. North Los Angeles County is expected to experience the highest rate of growth in trip production at 45 percent while Central Los Angeles is expected to produce the largest number of trips, at 8.2 million.

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Figure 29

**Total Daily Trip Production by County (2017 – 2047)**

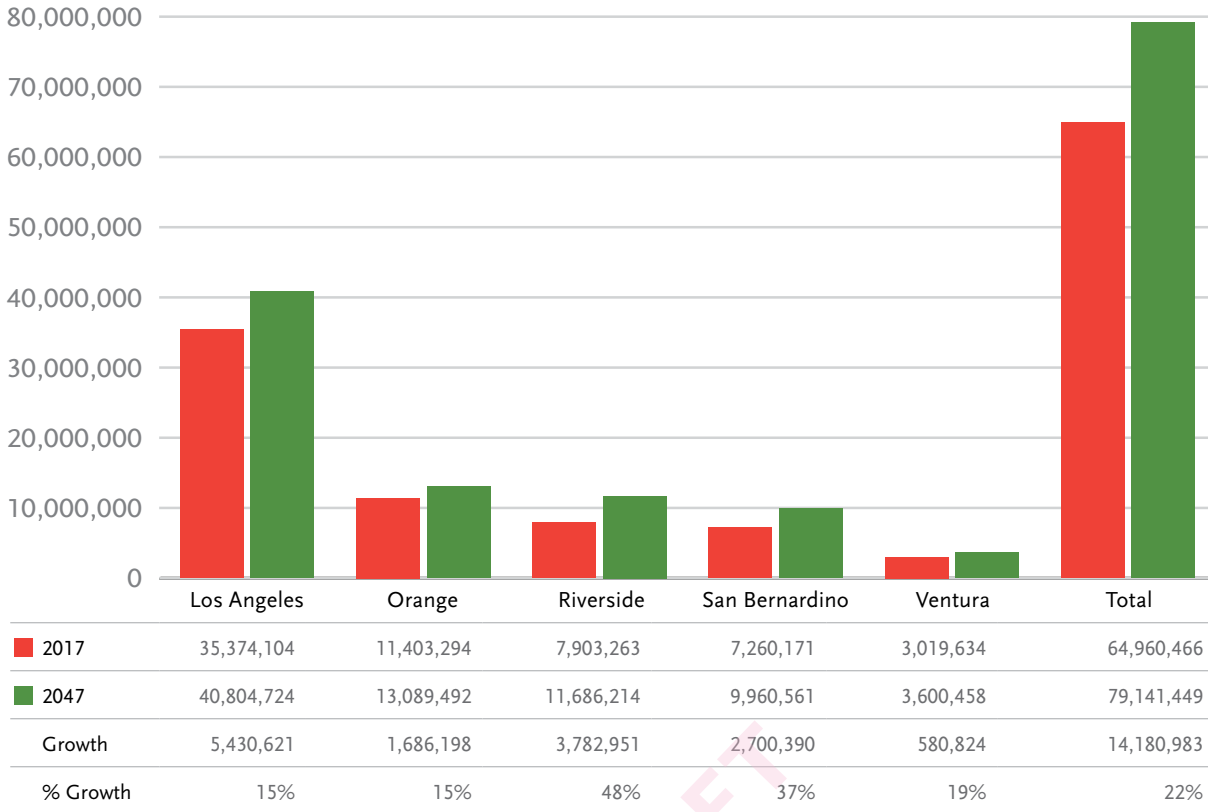


Figure 30

**Total Daily Trip Production by Subregion (2017 – 2047)**



## Trip Attractions

The results of trip attraction are summarized in Figure 31. Figure 32 illustrates that LA County is expected to be the largest trip attractor in the region in 2047, with 40.8 million trips, a growth of 15 percent over 2017. Riverside County is expected to experience the highest growth rate, of 52 percent from 2017 to 2047. Figure 32 shows the attraction growth by subregions in LA County. North Los Angeles County is projected to experience the highest rate of growth at 39 percent while Central Los Angeles is expected to attract the largest number of trips, at 7.6 million.

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Figure 31

**Total Daily Trip Attraction by County (2017 – 2047)**

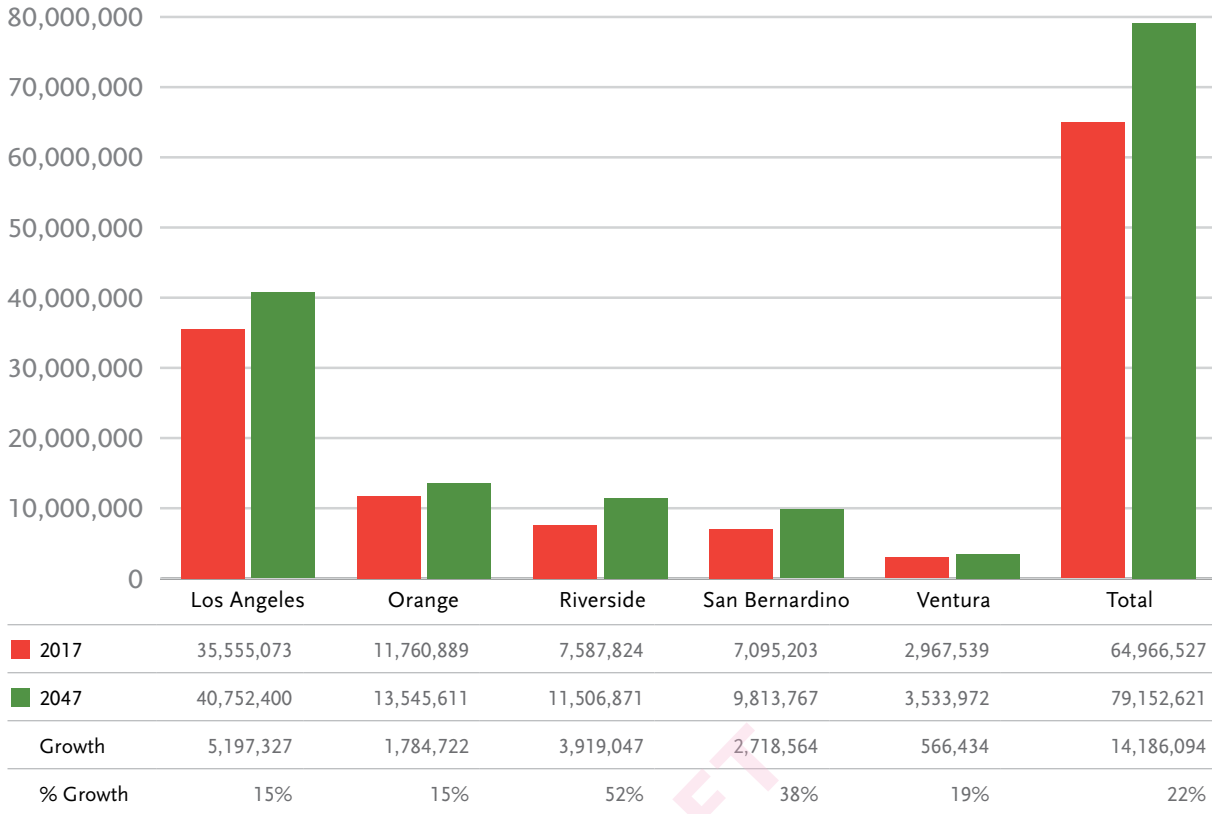


Figure 32

**Total Daily Trip Attraction by Subregion (2017 – 2047)**



# Trip Distribution

Trip distribution is the process where person trip productions (for each TAZ) are linked to specific attraction TAZs, thereby creating a “trip table” of trip interchanges between TAZs. The SCAG trip distribution model created trip tables for 2012 and 2040. We interpolated those trip tables to create the 2017 trip tables and extrapolated to create the 2047 trip tables.

## Years 2017 & 2047

Figure 33 summarizes the trip distribution patterns for 2017 daily peak period home-based work trips in each subregion of LA County. The large pie in the lower left corner of the exhibit shows the number of home-based work trips produced by each subregion. The Central Los Angeles subregion produces the largest number of home-based work trips—884,100. The Gateway Cities subregion produces the next highest number at 759,100.

Figure 33 also displays the home-based work trip production activity within each subregion, as represented by the smaller pies. The largest interaction within each subregion occurs intra-subregion; that is, the largest percentage of home-based work trips within each subregion stays internal to that subregion. For the San Gabriel Valley subregion, the second highest interaction occurs with trips headed outside LA County (at 15 percent), followed by trips to Central Los Angeles (at 12 percent).

Figure 34 displays the trip distribution patterns for 2047 daily peak period home-based work productions in the subregions of LA County. The Central Los Angeles subregion is expected to produce the largest number of home-based work trips, at 1.2 million, with the Gateway Cities subregion following at 836,300 trips. The largest interaction within each subregion occurs intra-subregion. For the San Gabriel Valley subregion, the second highest interaction occurs with trips destined outside of LA County, at 21 percent.

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Figure 33

### PEAK PERIOD HOME-TO-WORK TRIP PRODUCTIONS BY SUBREGION, 2017

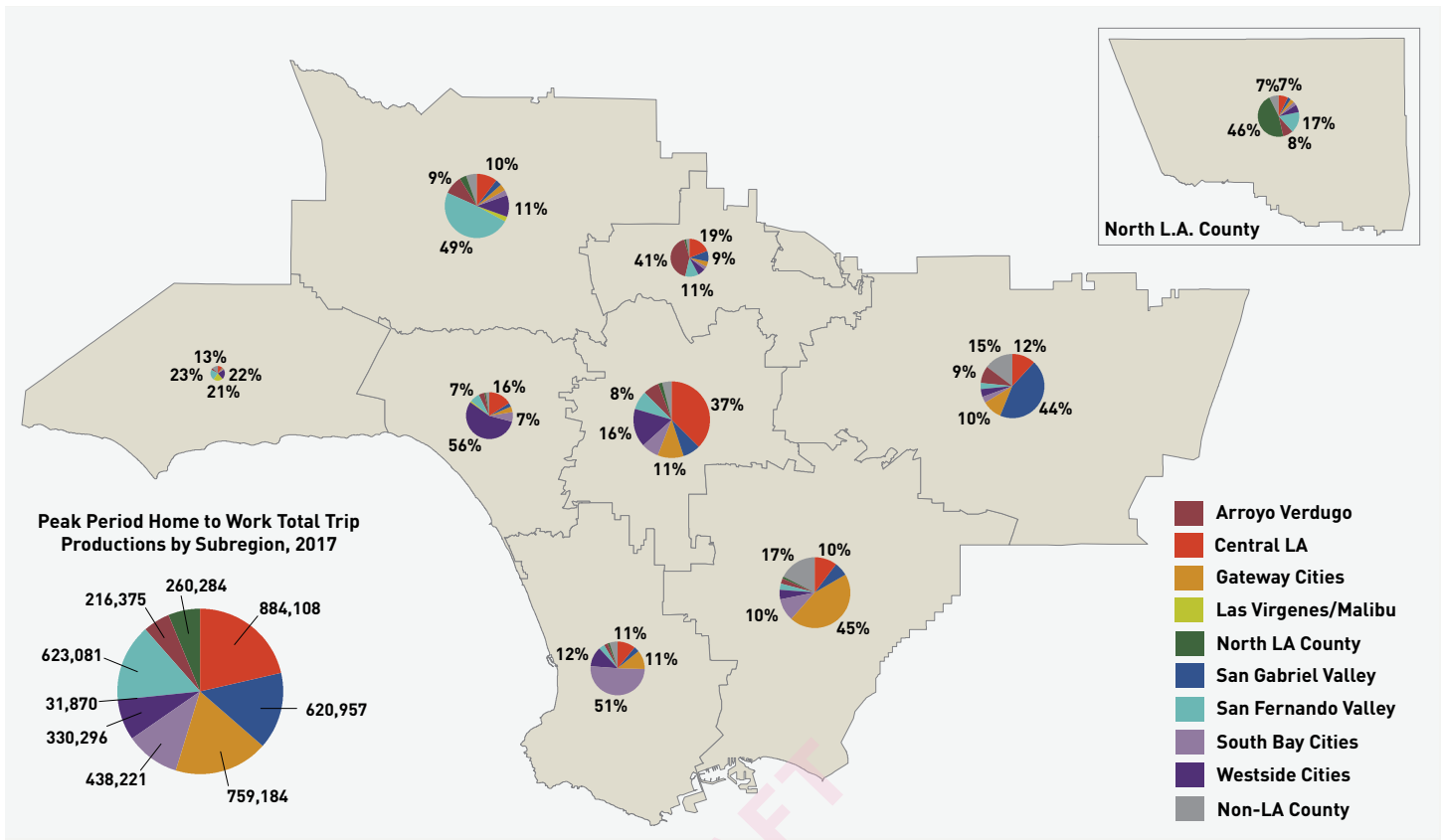


Figure 34

### PEAK PERIOD HOME-TO-WORK TRIP PRODUCTIONS BY SUBREGION, 2047

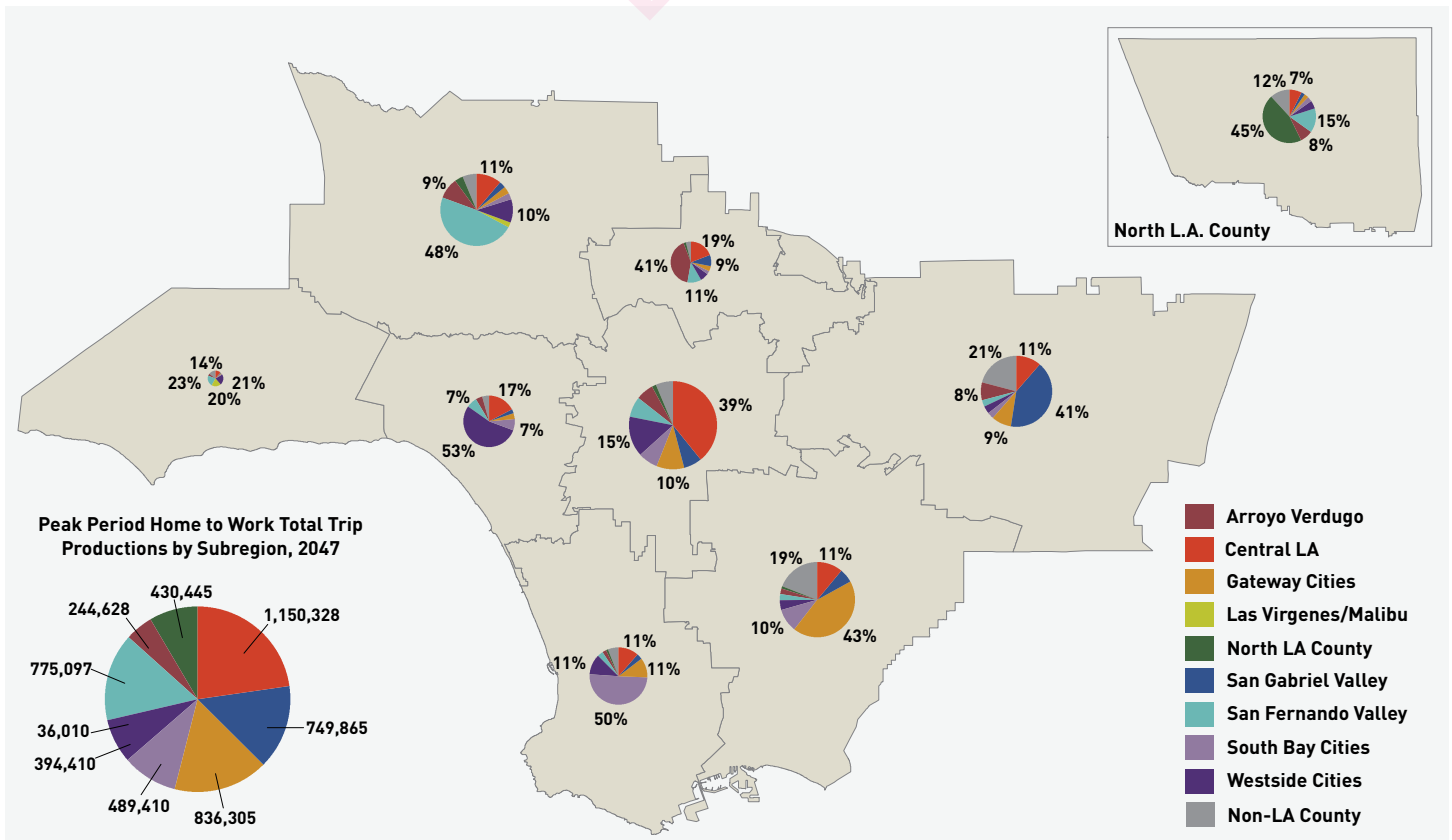




Figure 35 summarizes the daily peak period home-based work trip attractions within each subregion in year 2017. The Central Los Angeles subregion attracts the largest number of home-based work trips in the County (762,300), followed by the Gateway Cities subregion at 717,507 and San Gabriel Valley subregion at 567,600. Within Central Los Angeles, 10 percent of trips originate in the Gateway Cities subregion and 9 percent from the San Gabriel Valley subregion.

Figure 36 illustrates the daily peak period home-based work trip attractions within each subregion in year 2047. The Central Los Angeles subregion is expected to attract the largest number of daily peak period home-based work trips in the County at 977,400 trips, followed by the Gateway Cities subregion at 784,800 and the San Gabriel Valley subregion at 636,200. For the Central Los Angeles subregion, the second highest interaction occurs with trips expected to originate in the San Gabriel Valley and Gateway Cities subregions, both at 9 percent.

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Figure 35

### PEAK PERIOD HOME-TO-WORK TRIP ATTRactions BY SUBREGION, 2017

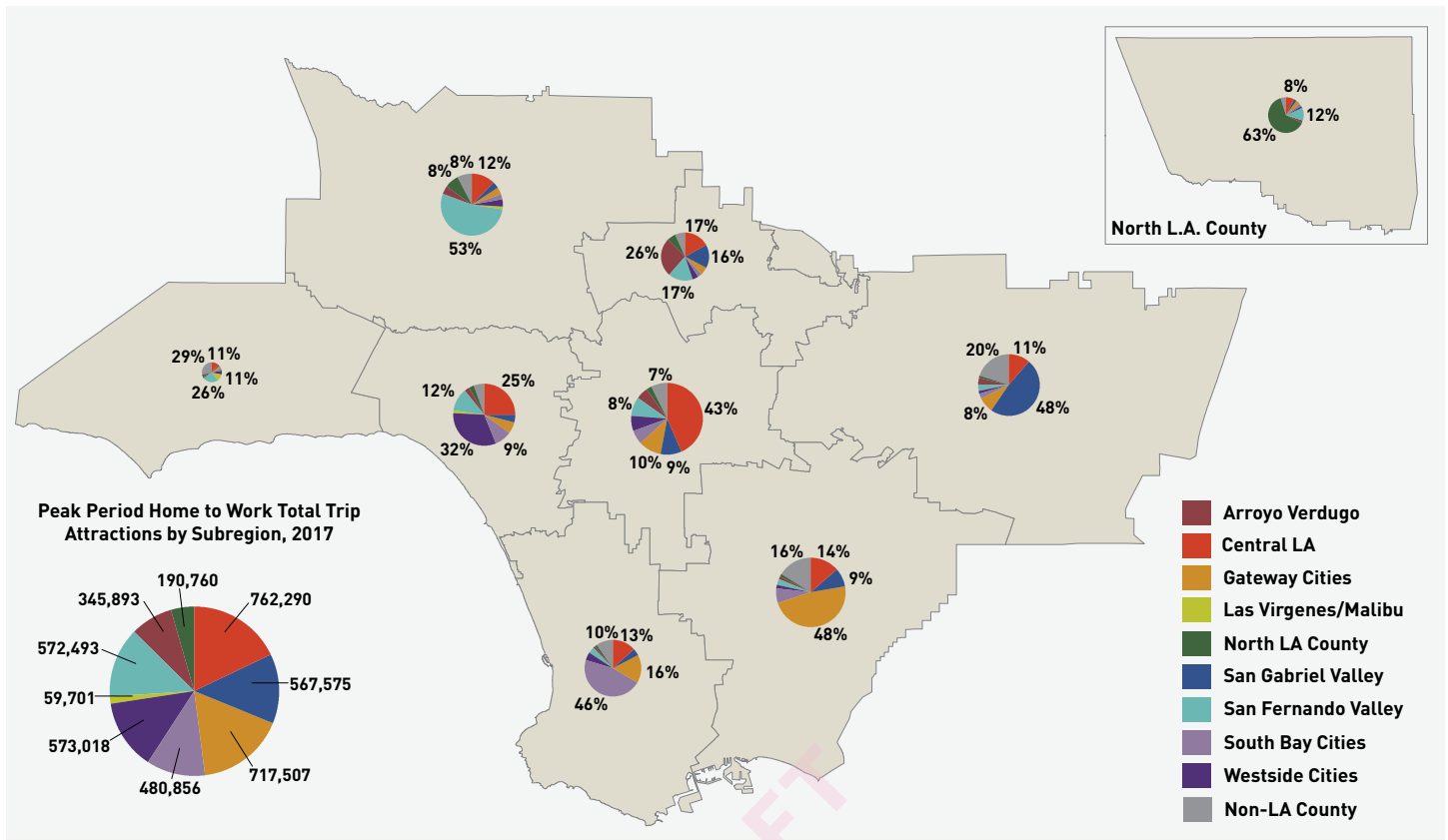
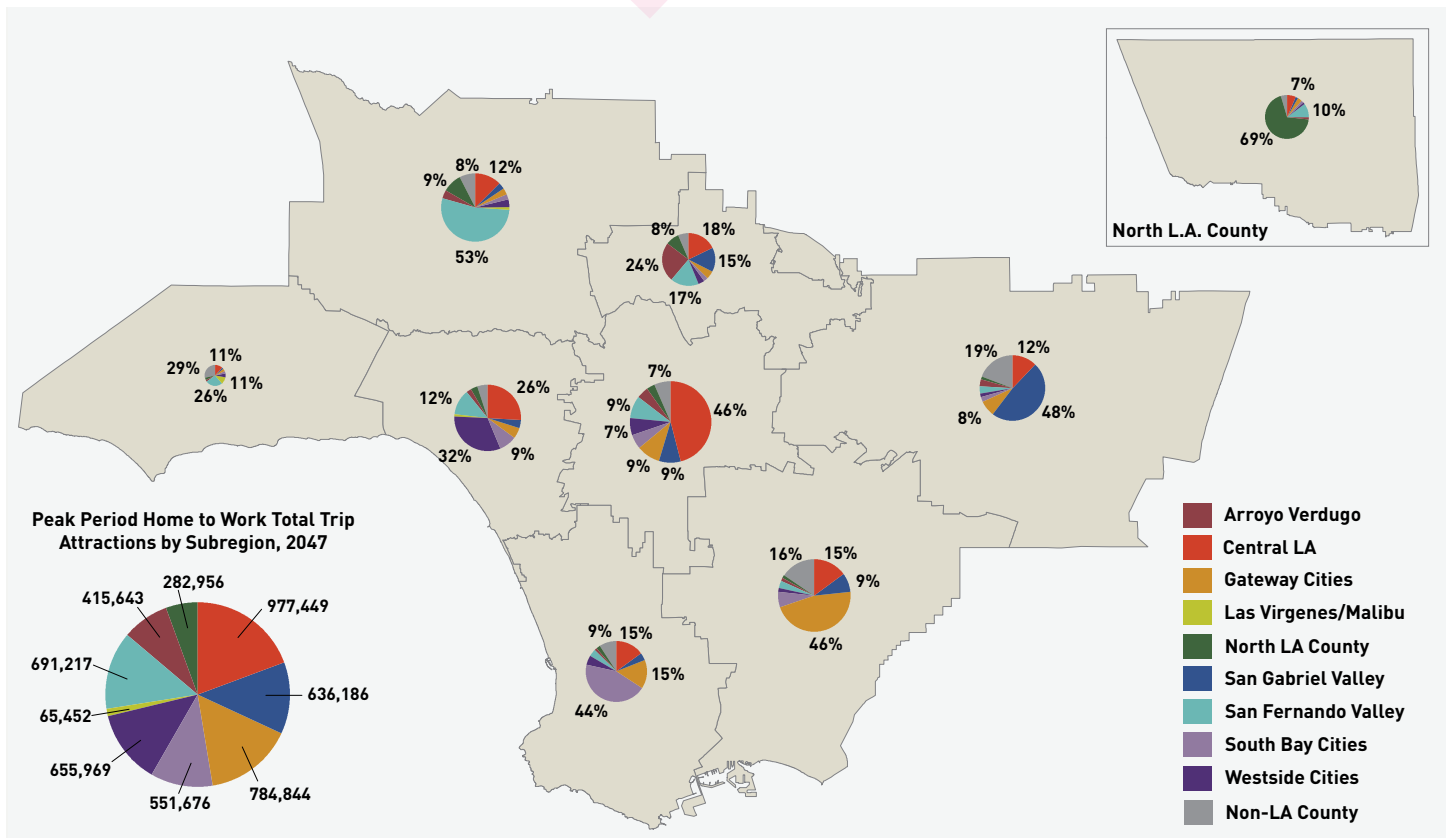


Figure 36

### PEAK PERIOD HOME-TO-WORK TRIP ATTRactions BY SUBREGION, 2047



## All Purposes Travel Patterns in Years 2017 & 2047

Figure 37 illustrates the total daily trip productions within each subregion for year 2017. The Central Los Angeles subregion produces the highest number of total daily trips at 6.9 million, followed by the Gateway Cities subregion at 6.6 million. The largest interaction in each subregion occurs intra-subregion.

Within the Central Los Angeles subregion, 12 percent of the trips are destined to the Westside Cities subregion. Within the San Gabriel Valley subregion, 11 percent of the trips are destined outside LA County.

Figure 38 shows the total daily trip production patterns for 2047 in each subregion of LA County. The Central Los Angeles subregion is expected to produce the largest number of total daily trips, 8.2 million. The Gateway Cities subregion is expected to produce the second largest number of daily trips at 7.1 million. For the San Gabriel Valley, the second highest interaction occurs with trips destined outside LA County at 13 percent, followed by trips destined to the Central Los Angeles subregion at eight percent.

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Figure 37

### DAILY TRIP PRODUCTIONS BY SUBREGION, 2017

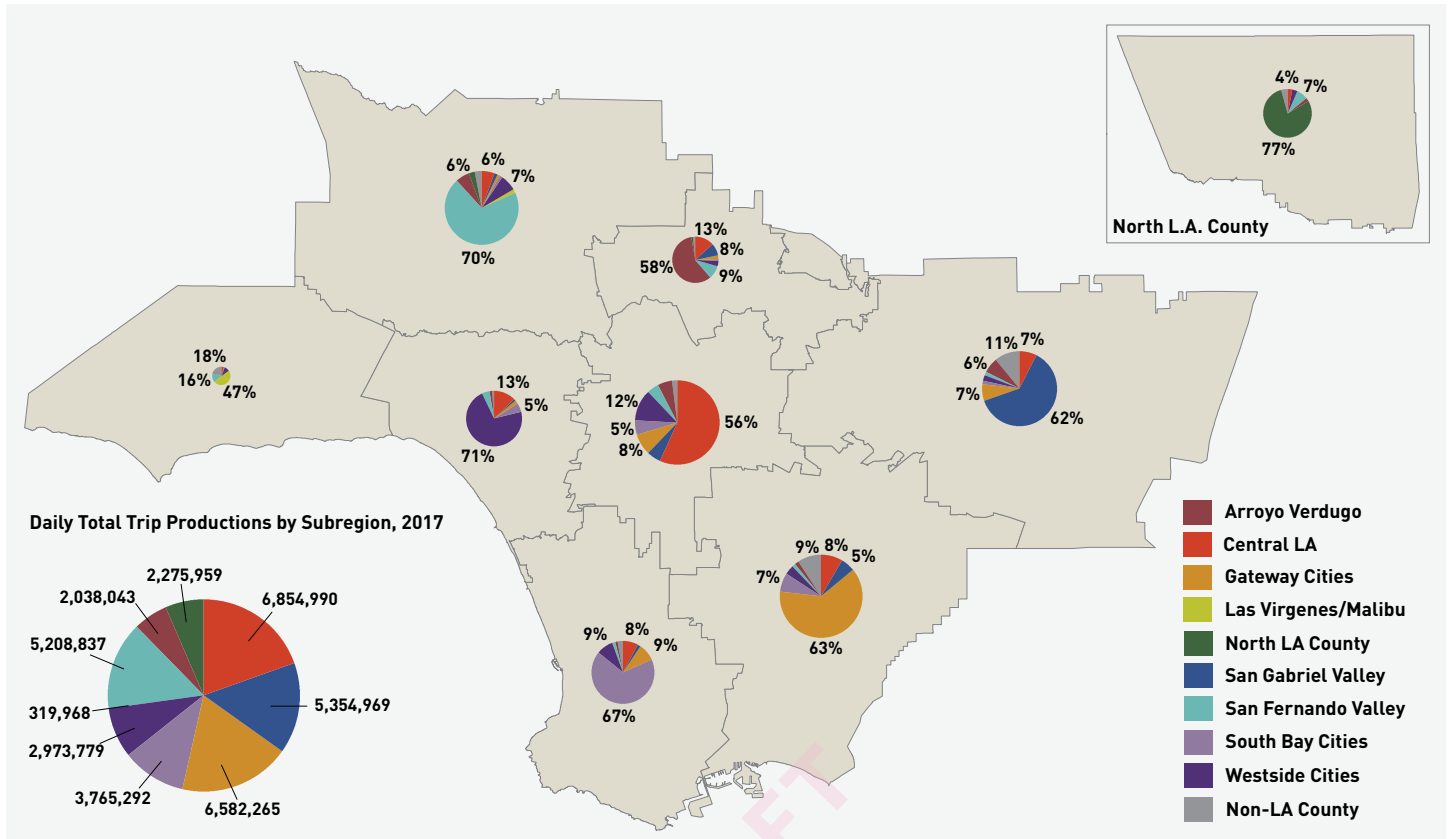


Figure 38

### DAILY TRIP PRODUCTIONS BY SUBREGION, 2047

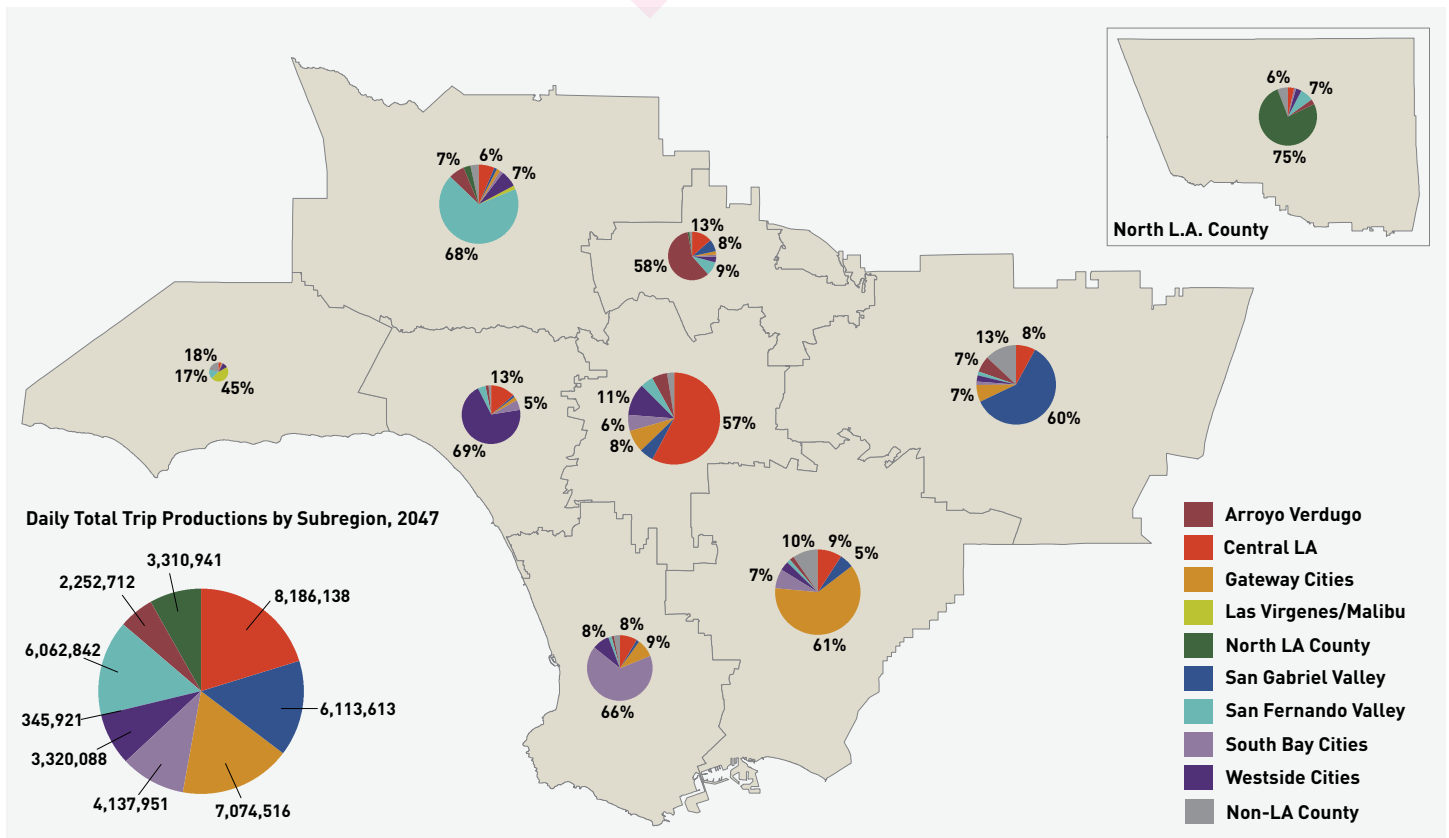


Figure 39 illustrates the total daily trip attractions within each subregion for year 2017. The Central Los Angeles subregion attracts the highest number of total daily trips, at 6.3 million, followed closely by the Gateway Cities subregion at 6.1 million. Within the Central Los Angeles subregion, the largest number of trips originates in the Gateway Cities subregion (nine percent), followed by the San Gabriel Valley subregion at six percent. Within the Gateway Cities subregion, the largest number of trips originates outside LA County (nine percent) and from Central Los Angeles (nine percent).

Figure 40 illustrates the total daily trips attracted by subregion expected for year 2047. The Central Los Angeles, Gateway Cities, and San Gabriel Valley subregions each expected to attract 7.6, 6.6, and 5.5 million trips, respectively. Within the Central Los Angeles subregion, eight percent of trips are destined to go to the Gateway Cities subregion.

## Mode Choice

The mode choice process determines the share of person trips taking various modes of transportation. The modes in the Metro Travel Demand Model are automobile and transit. The submodes under automobile include single-occupancy and high-occupancy vehicles (two-person carpools and three persons or more carpools) as well as toll vs. non-toll while the submodes under transit are bus (including local bus, rapid bus, express bus, and transitway bus) and rail (including urban rail and commuter rail).

The mode choice model, in nested logit functional form, is specified separately for peak and off-peak periods. For each period, we include four trip purposes: home-work, home-university, home-other, and non-home-based.

## Traffic Assignment

Traffic assignment is the process of loading vehicle trips onto a highway network and transit trips onto a transit network. This process produces traffic volumes and the resulting congested speeds on each road segment represented in the highway network as well as passenger volumes on the transit network.

Metro uses a four time-period equilibrium highway assignment process. Separate vehicle trip tables are generated for the AM peak period, midday period, PM peak period, and night period. These trip tables are assigned to the appropriate highway network using equilibrium assignment procedures. The assignment results were reviewed for reasonableness and minor adjustments were made when required.

Figure 39

### DAILY TRIP ATTRactions BY SUBREGION, 2017

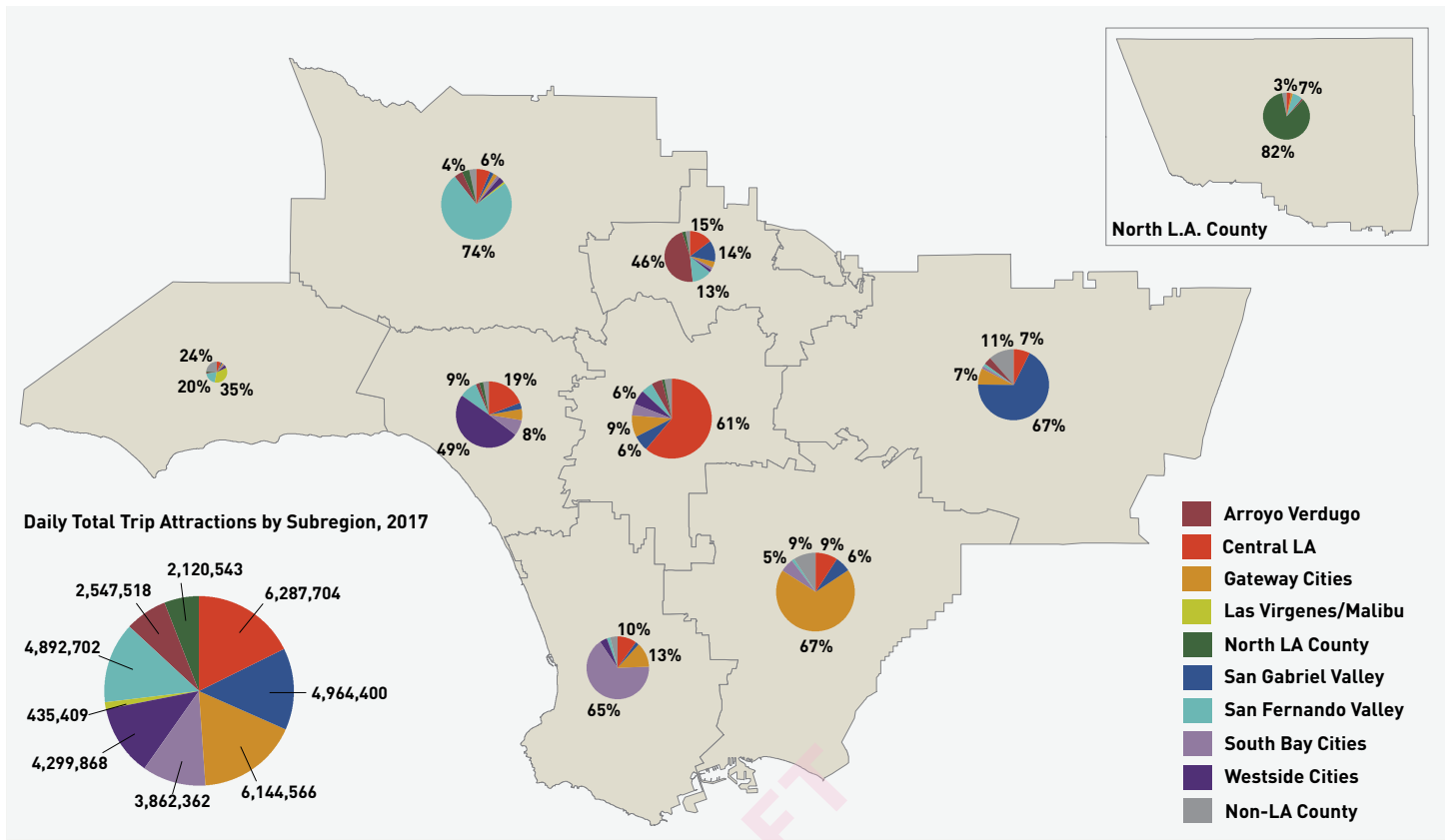
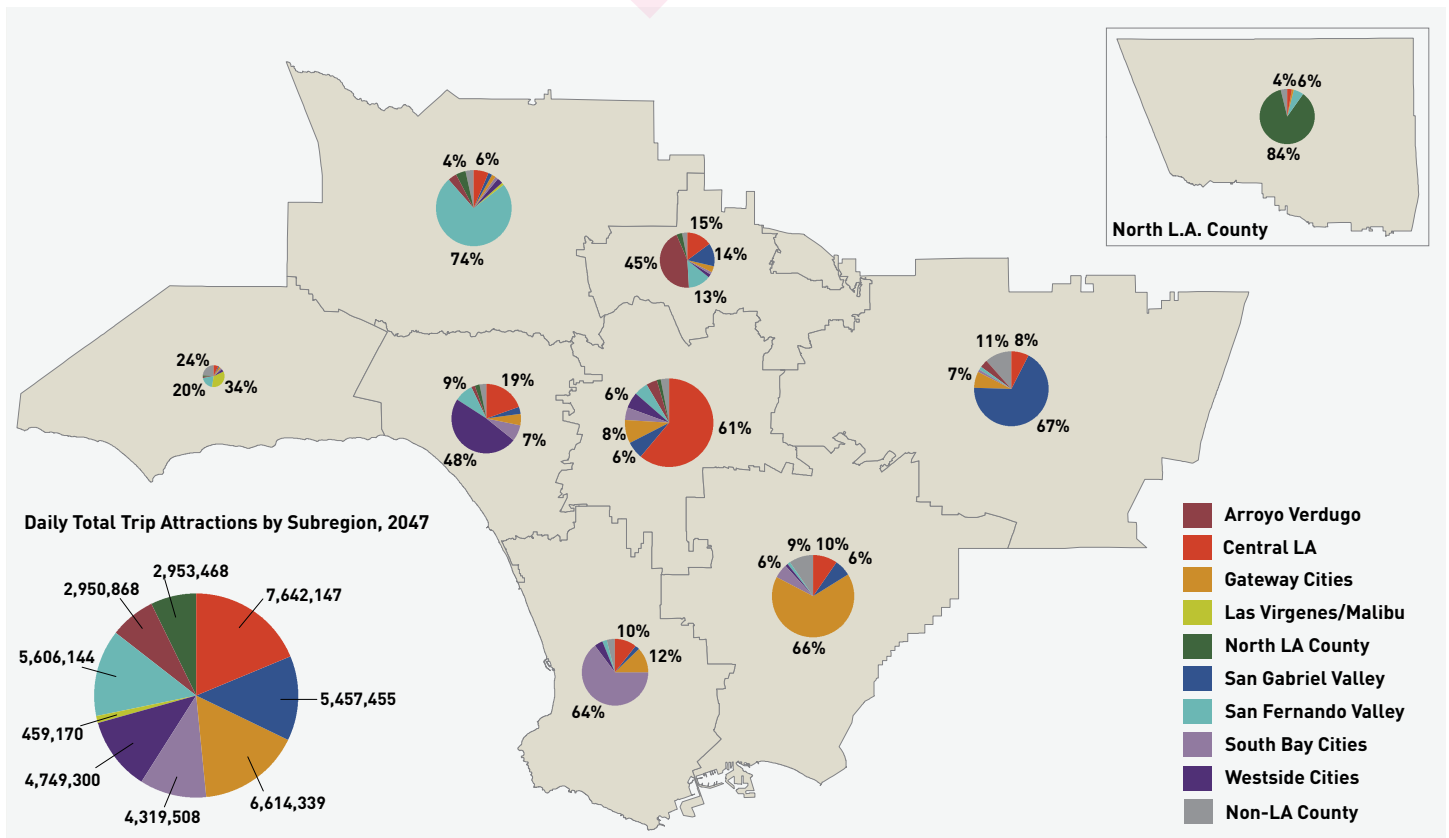


Figure 40

### DAILY TRIP ATTRactions BY SUBREGION, 2047





# Scenario and Hybrid Testing

Several scenarios were designed for testing that aligned with Metro's Vision 2028 Strategic Plan goals. The insights learned from these model runs were instrumental for the development and composition of the recommended 2020 Plan. This section describes the definitions and results for the Scenario Testing that were modeled for Metro's 2020 LRTP. In addition, it describes the assumptions and procedures used to set up the scenarios. The section also presents the hybrid scenario, which is the recommended 2020 LRTP scenario, that combined various transportation improvements and policy components that had been previously tested.

The underlying transportation network used in the LRTP scenario modeling contains the same major transportation capital projects as the Southern California Association of Governments' 2020 RTP/SCS update. As part of the 2047 Baseline highway network, ExpressLanes are included on the following freeways – I-10 (Downtown Los Angeles to El Monte), I-110 (South Los Angeles to Carson), I-105 (Hawthorne to Norwalk), I-405 (Sherman Oaks to Westwood) and I-710 (Commerce to Long Beach). The first two ExpressLanes exist in the present-day transportation network, and the latter three are assumed to be completed and part of the network by 2047. This network was used as the foundation for development of these listed scenarios:

1. ExpressLanes Scenario
2. High Frequency Transit Scenario
3. Innovative Transportation Scenario
4. Urban Infill Scenario
5. Active Transportation Scenario
6. Cordon Pricing Scenario
7. VMT Pricing Scenario
8. 2020 LRTP (Hybrid-1) Scenario

There are approximately 40.8 million daily trips in LA County, which account for about half of the SCAG region's trips. The total number of daily trips for the region (and thus the county) are consistent throughout all scenarios.

## ExpressLanes Scenario

The ExpressLanes Scenario was created to model Metro's Vision 2028 goal of increasing the options to avoid congestion on freeway corridors by paying tolls. To create the highway network for this scenario, all the high occupancy vehicle (HOV) lanes in LA County were converted into Express/high occupancy toll (HOT) lanes. This will serve two purposes:

1. The previous HOV users can still use the HOT lanes for free, and
2. This will allow additional users to use the lanes by paying toll.

In the ExpressLanes Scenario, these ExpressLanes were kept the same as the Baseline Scenario but the HOV lanes in LA County were converted into ExpressLanes. In addition, the number of lanes were increased to two in each direction and the capacity of the links were changed accordingly in both the peak and off-peak networks.

Under this scenario, countywide auto trips increase by approximately 54,000 trips (0.2% of the daily total). Most of these trips shift from transit while some shift from non-motorized trips. Among the auto trips, drive alone increases by about 1 percent while the shared ride 2 and shared ride 3 decrease by 1.7 percent and 0.6 percent respectively. The conversion of the HOV lanes to HOT lanes provides the drive alone mode an opportunity to use the HOT facility by paying toll, and thus increases the percentage of the drive alone trips in the county.

The effect of this scenario on the regional VMT and VHT is that with the increase in drive alone trips there is an increase of approximately 2.4 million vehicle miles and 144,000 vehicle hours in comparison to the Baseline.

## High Frequency Transit Scenario

The high-frequency transit scenario was created to model Metro's Vision 2028 goal of providing high-quality mobility options that enable people to spend less time traveling. The adjustments that were made for this scenario are:

1. Headways for the top 40 bus routes by ridership (which serve approximately 66 percent of Metro's bus riders) were capped to 15 minutes for each line, in each direction;
2. Model parameters for roadway segments (links) in the model network that the top 40 bus routes travel was adjusted to increase bus speed on those links by 30 percent.

The proposed transit operational improvements for links on the road networks include, but are not limited to, transit-only lanes or transit signal priority. As these would improve the operational efficiency of all buses traversing the improved links, bus routes outside the top 40 were also assumed to have a 30 percent increase in speed when travelling on the improved links.

## Innovative Transportation Scenario

The innovative scenario was created to model a future planning scenario where innovative and shared mobility options are included as travel modes. The innovations in transportation that are integrated into this scenario include autonomous vehicles, electric scooters, and transportation network companies (TNCs). In addition, an alternative parking option was enabled for autonomous vehicles. Under this scenario autonomous vehicles could be parked at their destination location, returned to their origin, or sent to an external lot. It is expected that under this scenario, automobile usage will increase, due to the inclusion of autonomous vehicles and TNCs. It is also expected that most of the e-scooter ridership will come from former walk or bike trips.

## Urban Infill Scenario

The Urban Infill Scenario was created to model a future planning scenario where intensified land use around transit can provide increased opportunities for transit-oriented communities. The socioeconomic inputs for the horizon year 2047 were adjusted to reflect the intensified land use. The following assumptions were used for the land use changes:

- > Total population and employment growth in LA County would be the same as the 2047 Baseline Scenario.
- > Zones were designated as station zones if they were within a half mile of an urban rail station.
- > All population growth from 2017 to 2047 was reallocated to station zones, and no population growth was allocated to non-station zones.
- > 15 percent of LA County's employment growth was reallocated to station zones. For non-station zones within LA County, employment growth was factored to keep the total employment growth in LA County the same as the 2047 Baseline Scenario.

It is expected that under this scenario, transit ridership will increase, primarily due to the increase in the number of people who live within a half mile radius of an urban rail station.

## Active Transportation Scenario

The Active Transportation Scenario was created to model a future planning scenario where the bicycle and transportation infrastructure within LA County was improved; providing a better environment for non-motorized travel and improve the modes' connectivity to transit. The transit skims and highway networks were modified using the following assumptions:

1. The model was modified to include an incentive for bicyclists, which was implemented as a modal constant.
2. In addition, as part of the Vision Zero goals, free-flow speed on arterials for autos on the transportation network was capped at 25 miles per hour.
3. Within LA County, to improve connectivity between modes, walk access and egress connections to transit were sped up by 20 percent.

It is expected that under this scenario that the bike share within LA County will be approximately 10 percent, and walk share will also increase.

## Cordon Pricing Scenario

The Cordon Pricing Scenario was created to model Metro's Vision 2028 goal of reducing the congestion by pricing the Urban Core, Central Business District (CBD) and Urban Business District (UBD) areas in LA County. To create the highway network for this scenario, special fees (referred to as decongestion fees) were coded on the centroid connectors in Urban Core, CBD, and UBD areas of LA County, and on the highway links and ramps entering the Urban Core and CBD areas to simulate cordon pricing.

With this pricing policy, trips going from outside to a UBD, CBD and Urban Core zone will be charged \$3/trip, \$6/trip and \$9/trip respectively. Further, the use of the freeway exit ramps to a CBD and Urban Core zone will increase the fees by an additional \$3/trip and \$6/trip respectively. Because the focus of the cordon pricing fees is on the Urban Core, CBD and UBD areas, it is important to summarize and analyze the model results by area type for this scenario to accurately gauge the impact of this policy.

## VMT Pricing Scenario

The Vehicle Mile Traveled (VMT) Pricing scenario was created to model Metro's Vision 2028 goal of providing high-quality mobility options that enable people to spend less time traveling. The scenario is designed to model the following Metro Vision 2028 initiative: Test and implement pricing strategies to reduce traffic congestion. The model captures the cost of driving in the parameter OPCOST, which includes fuel and other operating costs such as maintenance. The mode choice model calculates the cost of driving by the equation: Drive Cost = OPCOST \* Distance where distance is the drive distance between trip origin and destination. The VMT fee alternatives tested included:

1. Test 1: \$0.10 fee per mile.
2. Test 2: \$0.15 fee per mile.
3. Test 3: \$0.20 fee per mile.

## 2020 LRTP (Hybrid-1) Scenario

The 2020 LRTP scenario combines various transportation improvements and policy components that had been previously tested, including high frequency transit, an increased network of high occupancy toll (HOT) lanes (which are also referred to as Express Lanes), first and last mile improvements, and a VMT fee of 20 cents per mile on top of the current operating costs. Some of the component scenarios were modified for their application in the Hybrid Scenario. In addition, for the Hybrid Scenario, a free fare and transfer policy on all LA County bus, urban rail and BRT lines was implemented. This policy excludes Metrolink riders, who still pay regular fare on commuter rail, but includes regional local bus operators (e.g. Santa Monica Big Blue Bus, Foothill Transit, etc.).

The scenario is designed to model the following Metro Vision 2028 desired outcomes:

1. To provide high frequency, fast transit service; where high quality options are at most a 10-minute walk or roll from home, the maximum wait for a trip is 15 minutes, and buses operate at 30 percent faster speeds;
2. To provide options to bypass congestion via freeway corridor pricing;
3. To improve first and last mile connectivity.

The following adjustments were made to the transit networks for this scenario:

1. Headways for the top 40 bus routes by ridership (which serve approximately 66 percent of Metro's bus riders) were capped to 10 minutes for each line, in each direction;
2. Model parameters for roadway segments (links) in the model network utilized by the top 40 bus routes were adjusted to increase bus speed on those links by 30 percent;
3. Fares and transfer fees for all LA County bus and urban rail lines were set to zero; and,
4. Travel times on walk access, egress, and transfer links (modes 1, 2, and 3 in the transit network) were reduced by 20 percent, in order to represent improvements in first and last mile travel time.

## Mode Choice Results

Under this scenario, countywide auto trips decrease by approximately 807,000 trips (2.4% of the daily total). Among the auto trips, drive alone trips decrease by about 6.2 percent while the shared ride 2 trips decrease by 6.8 percent. The largest majority of these trips shift to transit while some shift to 3 and 4+ carpool and non-motorized trips. This is mainly due to the changes made in the transit and highway networks in the Hybrid Scenario. For example, the frequent and fast transit services in the Hybrid Scenario shifted some riders from auto to transit mode. In addition, the conversion of some of the HOV2+ lanes to HOT3+ lanes in the Hybrid Scenario also encouraged some of the shared ride 2 riders to shift from auto to other modes in the Hybrid Scenario. The increased operating cost in the Hybrid Scenario also shifted some of the trips to non-motorized mode.

MODE	BASELINE	HYBRID-1	DIFFERENCE	% DIFFERENCE
Bus subtotal	791,647	1,098,010	306,363	38.7%
Transit subtotal	1,600,068	2,332,514	732,446	45.8%
Auto subtotal	33,871,165	33,064,101	(807,064)	-2.4%
Non-Motorized Subtotal	5,330,526	5,405,193	74,667	1.4%
Total daily	40,801,759	40,801,807	48	0.0%

The boardings on all the urban rail lines increase in the Hybrid Scenario. Among these, the largest absolute increases are on the North-South Line, Purple Line and Green Line.

## Transit Results

The increased transit service provided in the Hybrid Scenario would require a corresponding increase in the bus fleet. The Baseline Scenario network requires 1,909 Metro bus vehicles in operation during the peak period, and the Hybrid Scenario requires 2,264 buses. This is an increase of 355 buses (18.6%) over the original fleet size. Revenue vehicle miles increase in the Hybrid Scenario by 26,922 miles (11.0%). Revenue vehicle hours will be impacted by both the increase in service and change in speed, but the speed related change cannot be estimated with the modeling and analysis tools available. However, the increase in revenue vehicle hours due to the service increase by a maximum of 2,349 hours (11.6%) is due solely to the increase in service.

Figure 41

### Systemwide Daily Boarding Comparison by Mode

TRANSIT SERVICES	BASELINE	HYBRID-1	DIFFERENCE	% DIFFERENCE
Local Bus Total Boardings	1,475,591	2,670,725	1,195,134	81%
Express Bus Total Boardings	44,503	67,0182	2,515	51%
Transitway	42,862	79,478	36,616	85%
Rapid Bus (Metro)	189,563	224,641	35,078	19%
BRT (Metro)	179,296	283,661	104,365	58%
Urban Rail (Metro)	1,170,978	1,744,883	573,905	49%
Commuter Rail	111,816	143,037	31,221	28%

The average trip length increases for all transit modes in the Hybrid Scenario. The provision of frequent and fast transit services with zero fare for all LA County transit modes (except Metrolink) give riders an opportunity to use these services for longer trips. Thus, the average transit trip length increases for all the modes (except BRT) in the Hybrid Scenario.

## Highway Results

The effect of this scenario on the regional VMT and VHT is as expected. With the decrease in drive alone and shared ride trips, there is a decrease of approximately 21 million vehicle miles (7%) and 1.6 million vehicle hours (14%) in comparison to the Baseline.

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# Performance Measures

This chapter summarizes transportation system performance in LA County with the improvements recommended in this Long Range Transportation Plan (LRTP). The performance is measured across various performance measures associated with transportation system goals and objectives. Performance measures serve as a basis for comparing alternative improvement strategies and for tracking performance over time. System performance is evaluated for three scenarios that cover the 30-year horizon of the LRTP: Existing, Trend, Measure M, and 2020 LRTP scenarios. These scenarios have the following characteristics and are described in detail in the Travel Demand Model chapter.

# L RTP Systemwide Performance

- > **Existing (2017):** This scenario describes the transportation system performance in 2017. This is the current conditions scenario.
- > **Trend (2047):** Referred to as the “Trend” scenario throughout the chapter, this scenario assesses the transportation system in 2047 with future population and employment growth conditions and no improvements to the transportation network. This scenario is the basis for assessing the impacts of Measure M and 2020 L RTP scenarios.
- > **Measure M (2047):** Referred to as the “Measure M” scenario, this evaluates the transportation system in 2047 with future population and employment growth conditions as well as the major highway and transit capital improvements detailed in the L RTP. These improvements are described in the Travel Demand Model section above.
- > **2020 L RTP (2047):** Referred to as the 2020 L RTP, this scenario includes the Measure M funded capital projects along with several bold policy initiatives, including a vehicle miles traveled (VMT) fee, free transit, and faster bus speeds. This is the recommended scenario for the 2020 L RTP.

The L RTP performance framework is organized around goals, objectives, and performance measures:

- > **Goals** (“What do we want to achieve?”) drawn from the service-oriented goals of Vision 2028.
- > **Objectives** (“How should we address our goals?”) drawn from public input gathered through the outreach phase of the L RTP, as well as objectives from countywide planning efforts, statutory requirements, and Vision 2028 initiatives.

> **Performance Measures** (“How do we track and measure success?”) drawn from Vision 2028, the US Department of Transportation’s Transportation Performance Management rulemaking, Metro’s L RTP/Measure M Performance Framework, the SCAG 2016 Regional Transportation Plan/Sustainable Communities Strategy, and other Metro plans and programs.

> This performance framework was developed in partnership with Metro’s internal departments, stakeholder input from the Policy Advisory Council (PAC), and input from the Metro Board.

The sections below highlight the systemwide performance measures and results for the four scenarios (Existing, Trend, Measure M, and 2020 L RTP). For some measures, the data and tools are insufficient to forecast future conditions. These are highlighted in the tables with “NA” for not-applicable. The sections are organized by the five goals from Vision 2028:

- > **Goal 1:** Provide high-quality mobility options that enable people to spend less time traveling
- > **Goal 2:** Deliver outstanding trip experiences for all users of the transportation system
- > **Goal 3:** Enhance communities and lives through mobility and access to opportunity
- > **Goal 4:** Transform LA County through regional collaboration and national leadership
- > **Goal 5:** Provide responsive, accountable, and trustworthy governance within Metro

# Goal 1

## Provide high-quality mobility options that enable people to spend less time traveling

As laid out in Vision 2028, to achieve this goal, Metro will expand transportation options, improve the quality of its transit network and assets, and take steps to manage demand on the entire network. The LRTP will help advance this goal and measure progress towards two supporting objectives:

1. Optimize the speed, reliability and performance of the transportation system
2. Provide high-quality mobility options for all

These objectives and related performance measures, highlighted in Figure 42 on the right, quantify the system-level travel times, reliability, and access to various transportation modes.

- > Countywide, average travel times for driving in the AM peak are longer than midday. In 2047, morning roadway travel times are expected to increase by roughly nine minutes, which is a 38% increase in travel time. Compared to the Trend, the Measure M scenario reduces the average AM trip by 2% and midday by 1%. Similarly, average transit travel times are expected to get longer between 2017 and 2047; however, the Measure M scenario is expected to improve transit travel times by 8% compared to the Trend. With the addition of the bold policies recommended in the 2020 LRTP, the average AM travel time for auto and transit are expected to improve by 19% and 16%, respectively, compared to the Trend.
- > Roadway travel time reliability measures how much longer a trip in bad traffic (the 95th percentile of travel times) is relative to the average trip at that time. For highways, both in the morning and midday this value is 24%. On major arterials (Countywide Strategic Arterial Network and Truck Network), the buffer time is 14% in the morning and 12% during midday. Transit reliability is measured by on-time performance. Metro's In-Service On-Time Performance, for all Metro buses, was close to 74% in fiscal year 2018. For Metro rail it was over 98% in 2018.

- > Currently, 8% of the households and 16% of jobs are within a 10 minute walk of high-quality transit (defined as fixed guideway stations). This number is expected to increase to 21% of households and 36% in the Measure M scenario. The Measure M scenario is expected to increase the percent of jobs within a 10 minute roll of high-quality transit from 48% to 62% compared to the Trend.
- > Transit travel time competitiveness compares the transit time to what it would take to drive a car between key destinations. Of twenty key origin-destination pairs, the average travel time ratio is roughly 2.5, meaning it takes two and a half times longer to take transit versus drive between the origin and destination.
- > Person hours of travel (PHT) in high occupant vehicle (HOV), where there is more than one person in the car, is expected to increase between the 2017 and the Trend scenario. Between the Trend and Measure M scenario, HOV PHT is expected to decrease, which is consistent with a reduction in vehicle hours of travel and vehicle hours of delay. Transit passenger hours traveled are expected to increase by 11% with the Measure M scenario and 68% for the 2020 LRTP scenario compared to the Trend.
- > Another measure of transportation choice is the mode share of active transportation. While overall bicycle and walking trips will increase, with the Measure M scenario the mode share for active transportation is not expected to increase. The active transportation mode share is currently 13.1% for all trips in 2017 and is expected to remain relatively constant.

Figure 42

## Goal 1 Systemwide Performance Results

SYSTEM PERFORMANCE OBJECTIVES	#	PERFORMANCE MEASURES	PERFORMANCE METRIC DESCRIPTION	EXISTING (2017)	TREND (2047)	MEASURE M (2047)	2020 LRTP (2047)
Optimize the speed, reliability and performance of the transportation system	1.a	Travel time by mode	AM travel time (in minutes) by auto	23.5	32.4	31.7	26.4
			Midday travel time (in minutes) by auto	17.0	20.1	19.9	NA
			AM travel time (in minutes) by transit	58.0	62.5	57.7	52.2
			Midday peak travel time (in minutes) by transit	64.3	64.6	61.3	NA
	1.b	Travel time reliability by mode	In-Service On-time Performance for Metro bus and rail (% of arrivals > 5 min later and departures > 1 before than scheduled)	Bus: 73.8% Rail: 98.5%	NA	NA	NA
			% variation in AM and Midday travel time on freeways	AM and Midday: 24%	NA	NA	NA
			% variation in AM and Midday travel time on CSAN	AM: 14% Midday: 12%	NA	NA	NA
Provide high-quality mobility options for all	2.a	Percent of households and jobs within 10-minute walk or roll of high-quality transit	Percent of households 10-minute walk or roll high-quality mobility options	Walk: 8% Roll: 38%	Walk: 9% Roll: 40%	Walk: 21% Roll: 55%	Walk: 21% Roll: 55%
			Percent of jobs within 10-minute walk or roll of high-quality mobility options	Walk: 16% Roll: 42%	Walk: 24% Roll: 48%	Walk: 36% Roll: 62%	Walk: 36% Roll: 62%
	2.b	Transit competitiveness (vs. driving) in key travel markets	Ratio of transit travel time to auto travel time between zonal pairs	Average Ratio: 2.49	NA	NA	NA
	2.c	Person travel hours in non-SOV modes	Daily person travel hours for HOV	9,382,646	14,018,530	12,933,380	NA
			Daily person travel hours for transit	522,661	815,531	908,143	1,367,320
	2.d	Active transportation mode share	% of trips made by bicycle or walking	13.1%	13.2%	13.1%	13.2%

# Goal 2

## Deliver outstanding trip experiences for all users of the transportation system

To achieve this goal, Metro seeks to improve the travel experiences of all users of the system. This means building and maintaining a world-class system that is attractive, affordable, efficient, safe, convenient, and user-friendly. The LRTP will help advance this goal and measure progress towards two supporting objectives:

1. Improve transportation system safety and security
2. Maintain a high level of customer satisfaction

These objectives and related measures, highlighted in Figure 43 below, quantify system-level safety and customer satisfaction. This includes tracking annual collisions, protecting vulnerable users through protected bikeways and sidewalks, and tracking customer satisfaction through regular surveying.

- > Figure 43 details the annual number, averaged over the past three years, of severe and fatal collisions involving autos, trucks, bicycles, and pedestrians. Auto-only collisions represent over 80% of all injury collisions; however, collisions involving pedestrians made up only 9% of all injury collisions, but 37% of the collisions resulting in fatalities. There is an annual average of 268 fatal collisions involving pedestrians, 39 involving bicyclists, and 50 involving trucks.
- > Protected bikeways include Class 1 paths and Class IV cycle tracks. Currently, there are only 60 miles of projected bikeways within 1/2 mile of fixed guideway transit stations. In the Trend scenario, with no new fixed guideway stations, the miles of bikeways would stay the same (assuming no increase in bike paths). In the Measure M scenario, the number would increase 73 miles. If local jurisdictions implement all bikeways planned in their bicycle plans, the Measure M scenario metric would increase significantly to 244 miles within 1/2 mile of fixed guideway transit stations. Currently, there is no countywide sidewalk inventory.

- > There were 1,632 Part I and 1,434 Part II crimes on the Metro system in FY19, where Part I crimes refer to more serious violent and property crimes. Compared to FY18, total crimes were down by roughly 1%, with a slight increase in the less serious Part II crimes (+2%) and a larger decrease in Part I crimes (-3%).
- > Generally speaking, Metro's customers have a high degree of satisfaction with Metro's bus, rail, and ExpressLane services. Close to 90% of customers are satisfied with Metro bus and rail service, and over 80% of ExpressLanes users are likely to support additional ExpressLanes projects countywide.

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Figure 43

## Goal 2 Systemwide Performance Results

SYSTEM PERFORMANCE OBJECTIVES	#	PERFORMANCE MEASURES	PERFORMANCE METRIC DESCRIPTION	EXISTING (2017)	TREND (2047)	MEASURE M (2047)	2020 LRTP (2047)
Improve transportation system safety and security	3.a	Collisions by mode by severity	Number of fatal and severe collisions involving autos	Severe: 1,974 Fatal: 362	NA	NA	NA
			Number of fatal and severe collisions involving trucks	Severe: 127 Fatal: 50	NA	NA	NA
			Number of fatal and severe collisions involving pedestrians	Severe: 761 Fatal: 268	NA	NA	NA
			Number of fatal and severe collisions involving bicycles	Severe: 249 Fatal: 39	NA	NA	NA
	3.b	Miles of protected bicycle pathways and sidewalks within ½ mile of high quality transit	Miles of protected bicycle pathways and sidewalks within ½ mile of high quality transit	Bikeways: 60 miles Sidewalks: Unknown	Bikeways: 60 miles Sidewalks: Unknown	Bikeways: 77 miles Sidewalks: Unknown	Bikeways: 77 miles Sidewalks: Unknown
	3.c	Part I & II crimes reported on Metro transit system	Part I & II crimes reported on Metro transit system (2019)	Part I: 1,632 Part II: 1,434	NA	NA	
	Maintain a high level of customer satisfaction	4.a	Customer satisfaction with Metro bus, rail, and Express Lanes systems	Are customers satisfied with Metro bus service	Strongly Agree: 45% Agree: 46% Disagree: 6% Strongly Disagree: 3%	NA	NA
Are customers satisfied with Metro rail service				Strongly Agree: 33% Agree: 56% Disagree: 9% Strongly Disagree: 2%	NA	NA	
Likelihood to support additional ExpressLane corridors				Very Likely: 54% Somewhat likely: 28% Somewhat unlikely: 8% Very Unlikely: 10%	NA	NA	



# Goal 3

## Enhance communities and lives through mobility and access to opportunity

Metro wants to improve individuals and families' access to jobs, essential services, education, and other social, cultural, and recreational opportunities. This means working to be responsive to the needs of diverse communities and seeking equitable outcomes from transportation investments. The LRTP will help advance this goal and measure progress towards five supporting objectives:

1. Promote access to opportunity in Equity Focus Communities
2. Reduce household costs spent on transportation and housing
3. Promote economic vitality
4. Improve environmental quality and resilience
5. Enhance public health and quality of life

These objectives and related measures, highlighted in Figure 44, quantify system-level performance in terms of equity, access to opportunity, economic benefits, affordability, environment, and public health. The first objective evaluates how systemwide performance in Equity Focus Communities (EFCs), defined geographic areas determined in need of access to opportunity, compares relative to the countywide averages. The EFCs comprise roughly 5% of the land area of LA County and contain roughly 30% of the population. These measures appear first in the table, but have been listed at the end of this introductory summary in order to highlight the comparisons to other countywide measures listed first.

- > There are just over 35,000 Federal, State, and County-Administered affordable housing units within 1/2 mile of high quality transit, defined as fixed guideway transit stations, which is 32% of all the units in LA County.
- > Residents of LA County spend roughly 33% of their income on combined housing and transportation costs.
- > In 2017, an estimated 20% of the county's jobs are located within 1/2 mile of fixed guideway transit stations. In the Trend scenario, the percentage increases to 28% without any new transit stations, suggesting that job growth will be somewhat concentrated around station areas. In the Measure M scenario, 36% of the jobs are expected to be within 1/2 mile of fixed guideway transit.
- > Regional growth can be measured as the increase in gross regional product attributable to transportation investments, increased economic activity, and benefits due to transportation system improvements. The increase in gross regional product is estimated to be \$196 billion over the 30 year horizon. The benefits can also be measured in new jobs created. It is estimated that the Measure M scenario will create an additional 1.84 million job years (a year of full employment) compared to the Trend.
- > Greenhouse gas emissions are expected to decrease between 2017 and 2047 due to increases in fuel efficiency and electrification. Between 2017 and 2047, the tons of CO<sub>2</sub> equivalent is projected to decrease 11%. The Measure M scenario is expected to further decrease these emissions, by 5%, relative to the Trend.
- > Air quality pollutants, specifically particulate matter (PM<sub>2.5</sub> and PM<sub>10</sub>), sulfur oxides (SO<sub>x</sub>), nitrogen oxides (NO<sub>x</sub>), and carbon monoxide, will also decrease significantly between 2017 and 2047 due to a cleaner fleet of vehicles on the roadways. Comparing the Trend with the Measure M scenario, the Plan scenario is expected to bring about modest decreases in CO, NO<sub>x</sub> and SO<sub>x</sub>, around 3-4% decreases, and no significant difference in particulate matter.

- > There are 659 identified activity centers (this includes regional parks, colleges, regional shopping centers, cultural centers, among other destinations). In 2017, 15% are accessible within a 10 minute walk and 44% within a 10 minute roll of high quality transit. In 2047, these percentages are expected increase to 24% and 60%, respectively.
- > As noted in Goal 1, the active transportation mode share, as modeled in Metro's travel demand model, is 12.4% for all trips. This is less than the 13.8% estimated from the recent National Household Travel Survey's estimate for LA County.
- > In 2017 there were only 11 miles of protected bikeways in EFCs within 1/2 mile of fixed guideway transit. In the Measure M scenario, the protected bikeway mileage is expected to increase to 18 miles. This represents a 40% increase in mileage, compared to a 22% increase for the county as a whole (measure 3.b). If agencies countywide implemented all the bikeways in their respective bike plans, the mileage would increase to 98 miles.
- > There are over 25,000 Federal, State, and County-Administered affordable housing units within 1/2 mile of high quality transit. This represents 23% of all the units in the county and 72% of the units within 1/2 mile of fixed guideway transit (measure 6a).

## Equity Focus Community Measures

- > Average travel times for auto trips originating in EFCs are slightly less than the county average in each scenario. The change in travel times between the Measure M scenario and Trend scenarios, at 2% in AM and 1% midday, is the same for both EFCs and the county as a whole. Average travel times for transit in EFCs improve slightly more than the county average; in the AM period they are 9% better in the Measure M scenario compared to the Trend, compared to 6% during midday.
- > Currently, households in EFCs have better access to fixed guideway transit stations than the county average. Specifically, 20% of households in EFCs are within a 10 minute walk of high quality transit and 60% are within a 10 minute roll, compared to 8% and 38%, respectively, for LA County (measure 2.a). In the future Measure M scenario, the percent of households in EFCs within a 10 minute walk will be 41% and 80% within a 10 minute roll of fixed guideway transit stations.
- > Roughly 28% of all fatal and severe collisions in LA County occur in EFCs. However, almost 40% of severe injury and fatal collisions involving pedestrians and bicycles in LA County occur in EFCs.
- > Residents living in EFCs spend an estimated 55% of their income on housing and transportation compared to 33% countywide (measure 6.b)
- > Roughly one third of all air quality pollutants, countywide, are emitted in EFCs. Compared to the Trend, the Measure M scenario is expected to decrease CO, NOx, and SOx by 9-10%, and particulate matter by 4%. These benefits are much higher in EFCs than the countywide average changes.
- > Roughly one third of all identified activity centers are located in EFCs. Of these activity centers, 32% are with a 10 minute walk and 76% are within a 10 minute roll of fixed guideway transit stations. With the Measure M scenario, these percentages are expected to increase to 39% and 84% respectively.
- > Of the principal arterials located in EFCs, 79% of the lane miles are in poor condition and only 2% are in good condition. This is in contrast to the county average for principal arterials, with 66% in poor condition and 6% in good condition (measure 13.a).

Figure 44

**Goal 3 Systemwide Performance Results**

SYSTEM PERFORMANCE OBJECTIVES	#	PERFORMANCE MEASURES	PERFORMANCE METRIC DESCRIPTION	EXISTING (2017)	TREND (2047)	MEASURE M (2047)	2020 LRTP (2047)
Promote access to opportunity in Equity Focus Communities	5.a	Travel time by mode in EFCs	AM travel time (in minutes) for trips originating in EFC by auto	22.6	30.3	29.6	NA
			Midday travel time (in minutes) for trips originating in EFC by auto	16.7	19.3	19.1	NA
			AM travel time (in minutes) for trips originating in EFC by transit	52.3	56.4	51.3	NA
			Midday peak travel time (in minutes) for trips originating in EFC by transit	58.4	58.1	54.8	NA
	5.b	Percent of EFC households within 10-minute walk or roll of high quality transit	Percent of EFC households within 10-minute walk or roll of high quality transit	Walk: 20% Roll: 66%	Walk: 22% Roll: 68%	Walk: 41% Roll: 80%	Walk: 41% Roll: 80%
	5.c	Collisions by mode and severity in EFCs	Number of fatal and severe collisions located in EFCs involving autos	Severe: 454 Fatal: 70	NA	NA	NA
			Number of fatal and severe collisions located in EFCs involving trucks	Severe: 28 Fatal: 10	NA	NA	NA
			Number of fatal and severe collisions located in EFCs involving pedestrians	Severe: 320 Fatal: 100	NA	NA	NA
			Number of fatal and severe collisions located in EFCs involving bicycles	Severe: 92 Fatal: 14	NA	NA	NA
	5.d	Miles of protected bicycle pathways and sidewalks within 1/2 mile of high quality transit in EFCs	Miles of protected bicycle pathways and sidewalks within 1/2 mile of high quality transit in EFCs	Bikeways: 11 miles Sidewalks: Unknown	Bikeways: 11 Sidewalks: Unknown	Bikeways: 18 miles Sidewalks: Unknown	

SYSTEM PERFORMANCE OBJECTIVES	#	PERFORMANCE MEASURES	PERFORMANCE METRIC DESCRIPTION	EXISTING (2017)	TREND (2047)	MEASURE M (2047)	2020 LRTP (2047)
	5.e	Affordable housing within 1/2 mile of high quality transit in EFCs	Federal, State, and County-Administered Affordable Housing Units in EFCs within 1/2 mile of high quality transit	25,215	NA	NA	NA
	5.f	Percent of household income spent on combined transportation and housing costs in EFCs	Percent of household income spent on combined transportation and housing costs in EFCs	55%	NA	NA	NA
	5.g	Air quality pollutants in EFCs	Annual short tons of quality criteria pollutants (Particulate Matter, NOx,, SOX, CO)	PM2.5: 132 PM10: 140 SOx: 95 NOx: 7,741 CO: 42,372	PM2.5: 33 PM10: 35 SOx: 77 NOx: 3,441 CO: 17,213	PM2.5: 32 PM10: 34 SOx: 71 NOx: 3,102 CO: 15,418	NA
	5.h	Percent of activity centers in EFCs within 10-minute walk or roll of high quality transit	Percent of activity centers in EFCs within 10-minute walk or roll of high quality transit	Walk: 32% Roll: 76%	Walk: 32%Roll: 76%	Walk: 39%Roll: 84%	Walk: 39%Roll: 84%
	5.i	Percent of roads and highway bridges in good and fair condition in EFCs	Percent of principal arterial roads in good and fair condition in EFCs	Good: 2% Fair: 19% Poor: 79%	NA	NA	NA
	Reduce household costs spent on transportation and housing	6.a	Affordable housing within 1/2 mile of high quality transit	Federal, State, and County-Administered Affordable Housing Units within 1/2 mile of high quality transit	35,087	NA	NA
6.b		Percent of household income spent on combined transportation and housing costs	Percent of household income spent on combined transportation and housing costs	33%	NA	NA	NA

SYSTEM PERFORMANCE OBJECTIVES	#	PERFORMANCE MEASURES	PERFORMANCE METRIC DESCRIPTION	EXISTING (2017)	TREND (2047)	MEASURE M (2047)	2020 LRTP (2047)
Promote economic vitality	7.a	Jobs within 1/2 mile of high quality transit	Jobs within 1/2 mile of high quality transit	695,515	1,245,740	1,608,174	1,608,174
	7.b	Regional economic growth attributable to transportation investments	Regional economic growth attributable to transportation investments	NA	NA	\$196 billion	NA
	7.c	Regional jobs attributable to transportation investments	Regional jobs years attributable to transportation investments	NA	NA	1.84 million	NA
Improve environmental quality and resilience	8.a	GHG emissions	Annual million metric tons of carbon dioxide equivalent (CO <sub>2</sub> e)	35.05 million	31.03 million	29.42 million	25.27 million
	8.b	Air quality pollutants	Annual short tons of quality criteria pollutants (Particulate Matter, NO <sub>x</sub> , SO <sub>x</sub> , CO)	PM <sub>2.5</sub> : 466 PM <sub>10</sub> : 493 SO <sub>x</sub> : 298 NO <sub>x</sub> : 27,236 CO: 129,227	PM <sub>2.5</sub> : 127 PM <sub>10</sub> : 135 SO <sub>x</sub> : 252 NO <sub>x</sub> : 12,298 CO: 53,264	PM <sub>2.5</sub> : 127 PM <sub>10</sub> : 135 SO <sub>x</sub> : 245 NO <sub>x</sub> : 11,786 CO: 51,153	NA
Enhance public health and quality of life	9.a	Percent of activity centers within 10-minute walk or roll of high quality transit	Percent of activity centers within 10-minute walk or roll of high quality transit	Walk: 15% Roll: 44%	Walk: 15% Roll: 44%	Walk: 24% Roll: 60%	Walk: 24% Roll: 60%
	9.b	Active transportation mode share	% of trips made by bicycle or walking	13.1%	13.2%	13.1%	13.2%

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# Goal 4

## Transform LA County through regional collaboration and national leadership

In order to achieve the vision laid out in its strategic plan, Metro must further cooperation, coordination, and collaboration with Metro and its many partners and stakeholders. This means being a leader and partnering with local jurisdictions to manage the transportation system, relieve congestion, and increase resident and freight mobility.

The LRTP will help advance this goal and measure progress towards three supporting objectives:

1. Manage roadway congestion
2. Increase share of travel by non-SOV modes
3. Support efficient goods movement

These objectives and related performance measures, highlighted in Figure 45 below, quantify system-level performance in terms of roadway congestion, mode share, and goods movement.

- > Vehicle hours of delay (VHD) per capita is expected to increase significantly between 2017 and 2047, from 82 hours per capita currently to over 135 hours per person per year in 2047. With the Measure M scenario, that number is expected to decrease by 12% to 119 annual hours per capita. In the 2020 LRTP scenario, VHD per capita is 22% less than the 2047 Trend.
- > Per capita vehicle miles traveled (VMT) are expected to increase by over 6% between 2017 and 2047. The Measure M scenario is expected to decrease VMT by over 1% compared to the Trend. With the additional bold policies in the 2020 LRTP scenario, the LRTP could result in a 7% reduction.
- > Person throughput is normally calculated at a corridor level. At the county level, the Mobility Index can be used as a proxy for throughput. This index quantifies how fast people are moving through the network. Between 2017 and 2047, the index drops from 41 to 34.6, indicating that conditions are expected to worsen. However, the throughput of the Measure M scenario is 7% higher than that of the Trend and the 2020 LRTP scenario is 12% higher than the Trend.

- > Over the past five years, the California Highway Patrol (CHP) cleared incidents on freeways in 35 minutes on average. For collisions, the rate was 42 minutes. Over the five year period, the average clearance time increased by 8% for all incidents and 5% for collisions.
- > Annual transit trips are expected to increase from 309 million in 2017 to 384 million in the Trend scenario. With the Measure M scenario, transit trips are expected to increase by 24% compared to the Trend, and with the addition of the bold policies included in the 2020 LRTP, the transit trips are expected to increase by 81% compared to the Trend.
- > The majority of travel is made by private vehicle, and as currently forecasted, will continue to be the case in the future. Drive alone mode share is around 46% and is expected to see only a slight decrease in the Measure M scenario. There will be a slight increase in the transit mode share, from 2.9% in 2017 to 3.1% in the Trend scenario. The Measure M scenario is predicted to increase the mode share to 3.9%, a 24% increase, and a more significant jump to 5.7% in the 2020 LRTP scenario, an 81% increase.
- > Between 2017 and 2047, truck vehicle hours of delay (VHD) is expected to increase significantly. However, between the Trend and Measure M scenarios, truck VHD is expected to decrease by 12%.
- > Travel time reliability for trucks is measured as the buffer time index on the Countywide Strategic Truck Arterial Network. This index quantifies how much longer a trip in bad traffic (the 95th percentile of travel times) is relative to the average trip at that time. On the CSTAN, it is 14% worse in the AM peak and 12% worse in the midday periods.

Figure 45

## Goal 4 Systemwide Performance Results

SYSTEM PERFORMANCE OBJECTIVES	#	PERFORMANCE MEASURES	PERFORMANCE METRIC DESCRIPTION	EXISTING (2017)	TREND (2047)	MEASURE M (2047)	2020 LRTP (2047)
Manage roadway congestion	10.a	Vehicle hours of delay per capita	Vehicle hours of delay per capita	82	136	119	93
	10.b	Vehicle miles traveled per capita	Vehicle miles traveled per capita	7,888	8,369	8,246	7,647
	10.c	Total person throughput	Mobility Index = (PMT / PHT) X (PMT/VMT)	41.0	34.6	37.0	41.5
	10.d	Average roadway incident clearance time	Average roadway incident clearance time for all incidents and collisions (minutes)	All: 34.6 Collisions: 42.1	NA	NA	NA
Increase share of travel by non-SOV modes	11.a	Annual transit trips	Annual transit trips	309 million	384 million	477 million	695 million
	11.b	Mode share	SOV mode share	46.2%	46.3%	45.8%	43.0%
			Carpool mode share	37.8%	37.3%	37.2%	38.1%
			Transit mode share	2.9%	3.1%	3.9%	5.7%
			Walk mode share	12.0%	12.1%	12.0%	12.1%
		Bike mode share	1.0%	1.1%	1.1%	1.1%	
Support efficient goods movement	12.a	Truck vehicle hours of delay	Annual truck vehicle hours of delay	35.8 million	97.0 million	85.2 million	
	12.b	Truck travel time reliability	% variation in AM and Midday travel time (in minutes) on CSTAN	AM: 14% Midday: 12%	NA	NA	NA

# Goal 5

## Provide responsive, accountable, and trustworthy governance within Metro

As the county's Regional Transportation Planning Authority and the designer, builder, and operator of California's largest transit system, Metro has the responsibility to LA County residents and tax payers to be good stewards of public resources. Furthermore, to deliver the best mobility outcomes and build partnerships, Metro must improve business practices to be responsive, accountable, and trustworthy. The LRTP will help advance this goal and measure progress towards two supporting objectives:

1. Maintain a state of good repair of transportation assets
2. Ensure accountability through transparent reporting practices

These objectives and related measures, highlighted in Figure 46 below, quantify system-level performance in terms of system preservation and transparency.

- > On the National Highway System (NHS), which includes all interstates and state routes in LA County, 50% of the lane miles are in good condition and only 3% are in poor condition. Alternatively, 66% of the lane miles of principal arterials in LA County are in poor condition and only 6% are in good condition. For bridges, 69% are in good condition and 4% are in poor condition.
- > Metro's Transit Asset Management (TAM) group monitors the condition of Metro's transit assets, which include revenue vehicles, service vehicles, equipment, facilities, infrastructure, and other assets. This performance measure tracks the amount of funding projected to be available for TAM relative to the overall need. This unfunded need is 17% of the total TAM need over a 25 year period.

- > Metro has released all of their legally mandated and financial disclosure reports. These include the triennial audits performed for the Federal Transit Administration and one prepared for Caltrans as a recipient of California's Transportation Development Act (TDA) funding. These include releasing the annual budget and Comprehensive Annual Financial Report (CAFR) each year. Finally, these include audits performed on behalf of the Independent Citizen's Advisory and Oversight Committee for Propositions A and C and Measures R and M.

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Figure 46

## Goal 5 Systemwide Performance Results

SYSTEM PERFORMANCE OBJECTIVES	#	PERFORMANCE MEASURES	PERFORMANCE METRIC DESCRIPTION	EXISTING (2017)	TREND (2047)	MEASURE M (2047)	2020 LRTP (2047)
Maintain a state of good repair of transportation assets	13.a	Percent of roads and highway bridges in good and fair condition	Percent of National Highway System in good and fair condition	Good: 50% Fair: 56% Poor: 3%	NA	NA	NA
			Percent of principal arterials in good and fair condition	Good: 6% Fair: 29% Poor: 66%	NA	NA	NA
			Percent of bridges in good and fair condition	Good: 69% Fair: 27% Poor: 4%	NA	NA	NA
	13.b	Percent of backlog to state-of-good-repair funding needs to address transit assets past useful life	Percent of backlog to state-of-good-repair funding needs to address transit assets past useful life	17%	NA	NA	NA
Ensure accountability through transparent reporting practices	14.a	Legal and policy reports issued on time	Percent of legally mandated and financial disclosure documents issued on time	100%	NA	NA	NA

# Title VI Analysis

The Title VI analysis was performed to assess the transportation impacts on distinct socioeconomic groups in LA County. The transportation impacts analyzed include:

- > Job accessibility within 60 minutes via transit; and
- > Mode choice by income quintile.

The distinct socioeconomic groups include:

- > Transit dependent;
- > African American;
- > Hispanic; and
- > Asian/Pacific Islander.

Using information from the U.S. Census Bureau (2013-2017 American Community Survey [ACS] 5-Year Estimates), a Census Tract (CT) area was designated as transit-dependent if it met one or more of the following criteria:

- > Zero-car ownership – 9.43% or more of the households do not own a car;
- > Low-income – 21.92% or more of the households have income of \$25,000 or less (in 2017 inflated-adjusted dollars); or
- > Senior citizens with medium-low-income – 12.81% or more of the individuals aged 65 or older, and median household income is less than \$59,410.

CTs were also designated with a specific socioeconomic group, if its population exceeded the socioeconomic group’s average for LA County (e.g., a CT with ten percent of households comprised of African Americans would be deemed an African American CT since that exceeded the 8.2 percent average for LA County). Figure 47 summarizes the ethnic population of LA County based on the 2017 ACS. Hispanic or Latino residents, at 48.4 percent of the population, comprise the largest non-white group in the County. Figure 48 presents the race population of LA County based on the 2017 ACS.

Figure 47

## Los Angeles County Ethnicity Based on 2017 ACS

	POPULATION	PERCENT
Hispanic or Latino	4,893,579	48.4%
Non-Hispanic Black or African American	799,579	7.9%
Non-Hispanic Asian/Pacific Islander	1,467,527	14.5%
Non-Hispanic White	2,676,962	26.5%
Non-Hispanic American Indian or Alaska Native	19,915	0.2%
(Non-Hispanic) Some other race	28,960	0.3%
(Non-Hispanic) Two or more races	219,180	2.2%
<b>Total</b>	<b>10,105,722</b>	<b>100.0%</b>

Figure 48

## Los Angeles County Race Based on 2017 ACS

	POPULATION	PERCENT
Black or African American	828,981	8.2%
White	5,232,835	51.8%
Asian/Pacific Islander	1,488,199	14.7%
American Indian and Alaska Native	68,211	0.7%
Some other race	2,101,984	20.8%
Two or more races	386,412	3.8%
<b>Total</b>	<b>10,105,722</b>	<b>100.0%</b>

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In addition to transit-dependency and socioeconomic group, Census Tracts were also classified by household income quintiles. The quintiles represent:

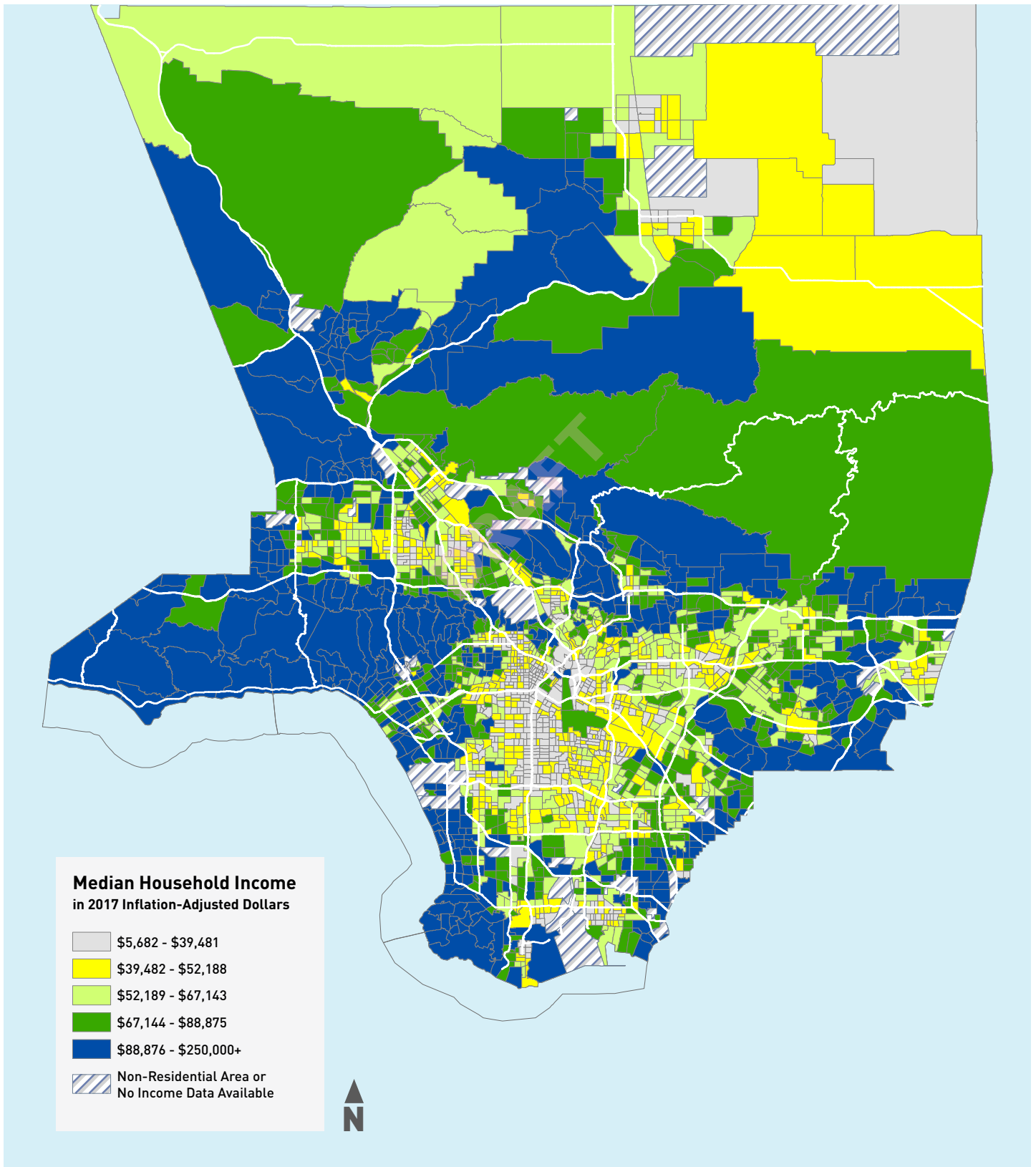
- > Low income – less than \$39,481
- > Moderate income – \$39,482 to \$52,188
- > Medium income – \$52,189 to \$67,143
- > Above average income – \$67,144 to \$88,875
- > High income – greater than \$88,876

CTs by income quintiles are illustrated in Figure 49. Low-income CTs are concentrated in Central Los Angeles while the high-income CTs are concentrated in the western part of LA County.

Median household income, as defined in the 2017 ACS, is \$54,501 (in 2017 inflated-adjusted dollars). A CT is designated with a specific income quintile, if its median household income falls into the range for that quintile (e.g., a CT with a median household income of \$25,000 would be designated as a low-income CT).

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Figure 49  
**2017 ACS MEDIAN ZONAL INCOME IN QUINTILES**



Source: U.S. Census Bureau 2013–2017 American Community Survey (ACS), 5-Year Estimates, Table B19013

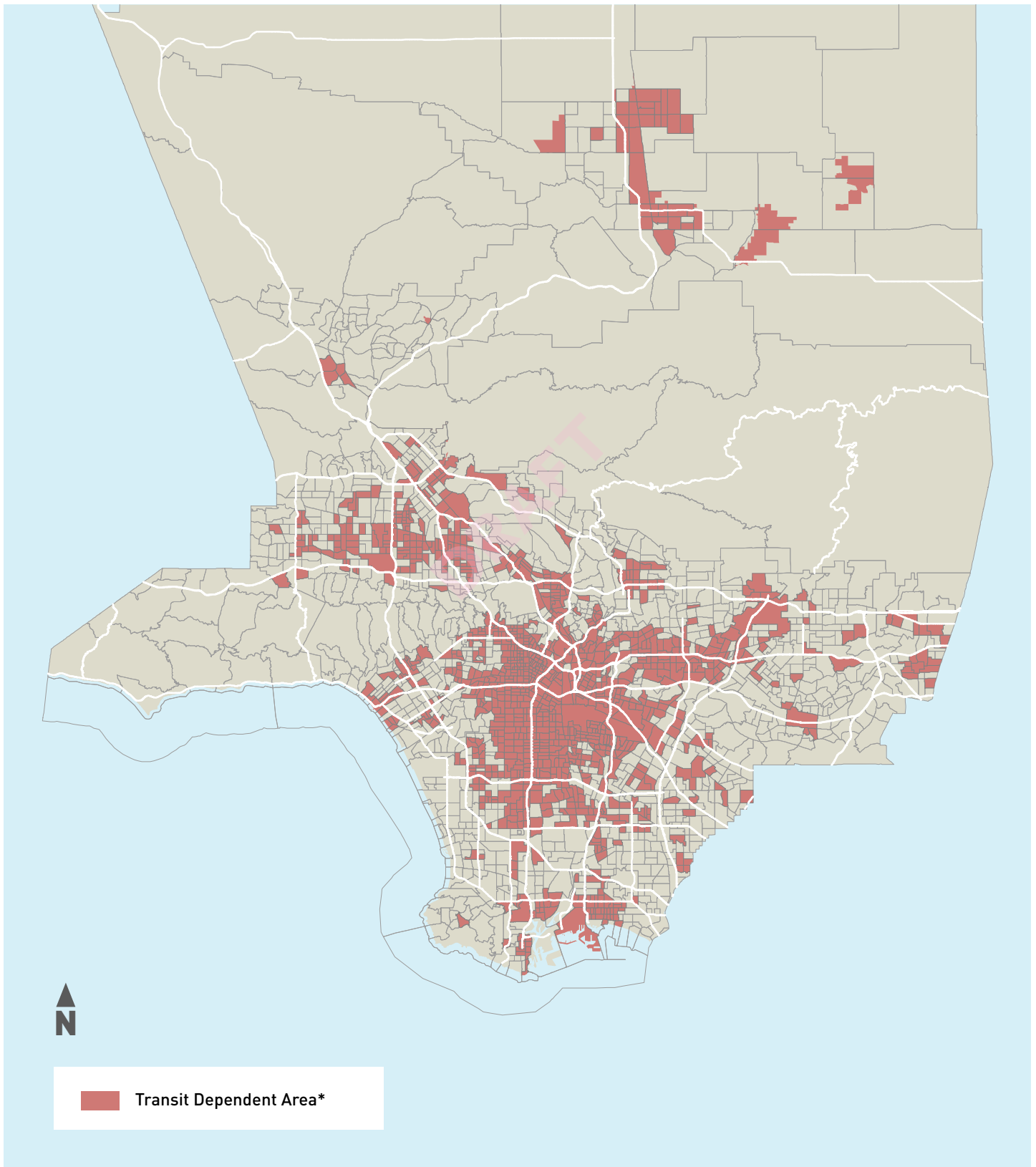
## Geographic Distribution of Socioeconomic Groups

Figure 50, Figure 51, Figure 52, and Figure 53 illustrate the distribution of transit dependent, African American, Hispanic, and Asian/Pacific Islander populations, respectively, throughout LA County. Figure 50 shows that CTs with a preponderance of transit-dependent households are concentrated in Central Los Angeles. Figure 51 illustrates the locations of CTs with a majority of African American households, which tend to be concentrated in Central Los Angeles, extending toward the southern part of the County. As shown in Figure 52, Hispanic majority CTs are dispersed throughout LA County, concentrated mainly in Central Los Angeles, and extending toward the eastern part of the County. Figure 53 displays the Asian/Pacific Islander households and shows they are concentrated mainly in the San Gabriel Valley, with pockets in the South Bay.

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Figure 50

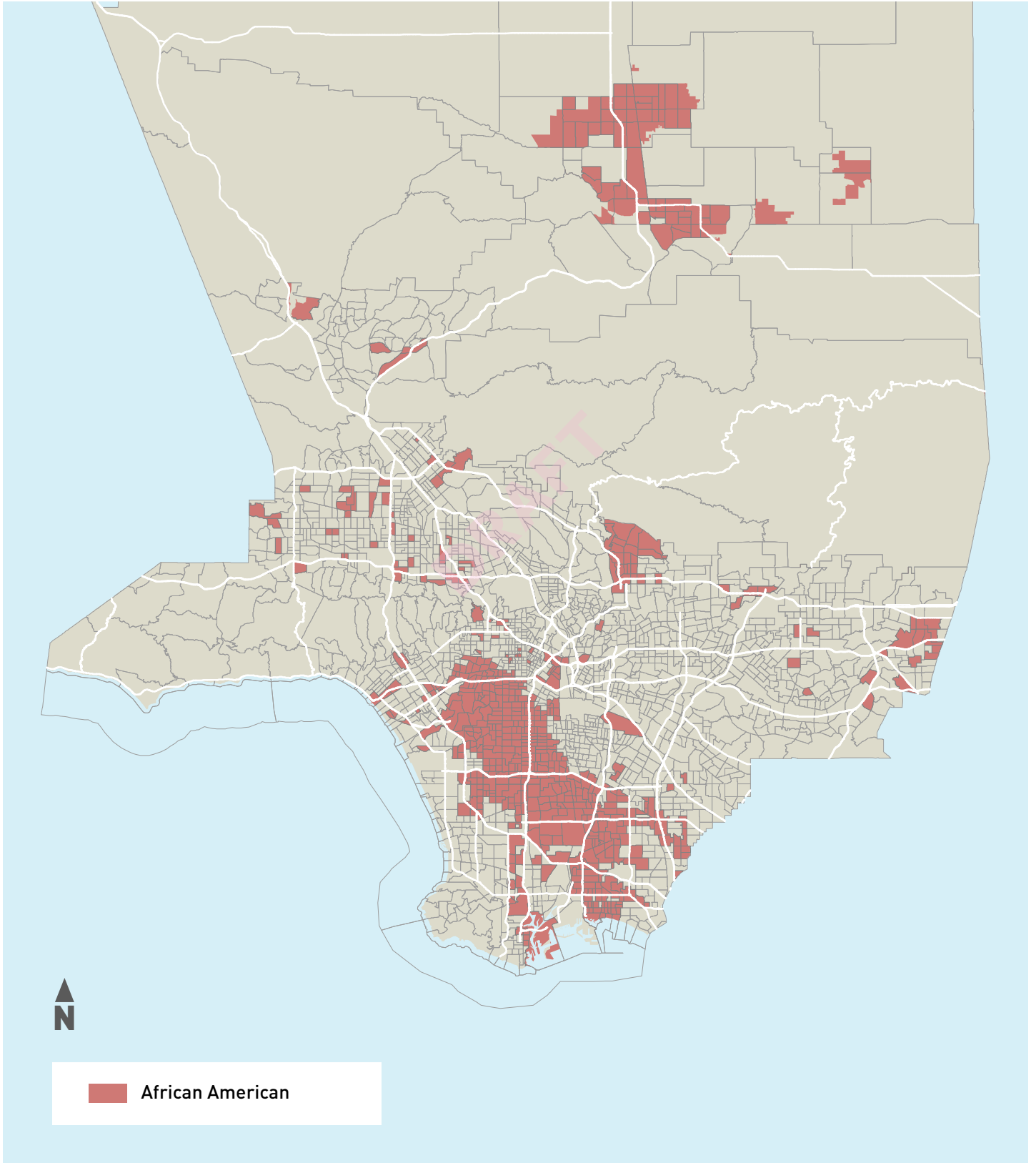
### TRANSIT-DEPENDENT POPULATION



Source: U.S. Census Bureau 2013–2017 American Community Survey (ACS), 5-Year Estimates

Figure 51

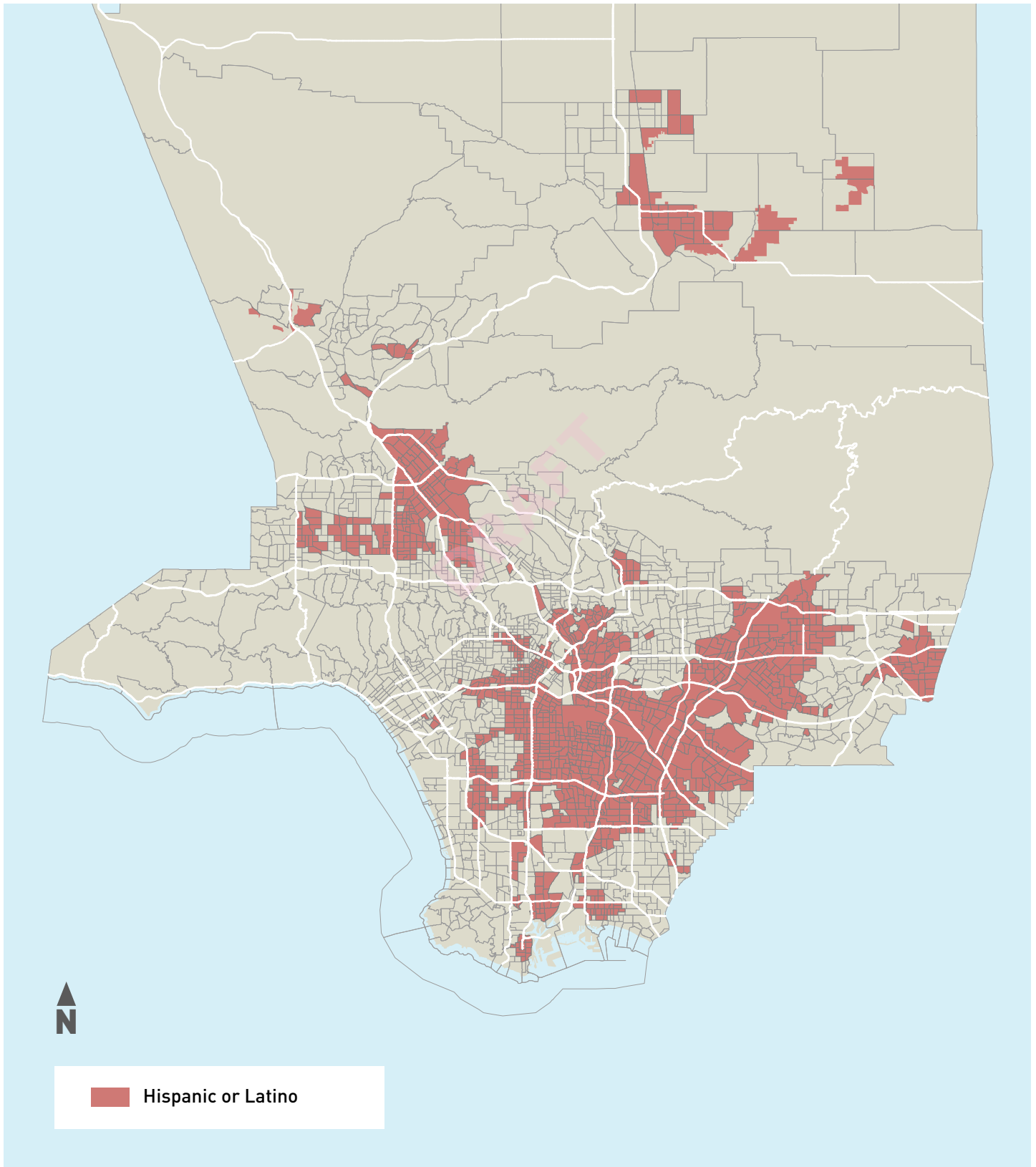
## AFRICAN AMERICAN POPULATION



Source: U.S. Census Bureau 2013–2017 American Community Survey (ACS), 5-Year Estimates, Table B02001

Figure 52

### HISPANIC OR LATINO POPULATION

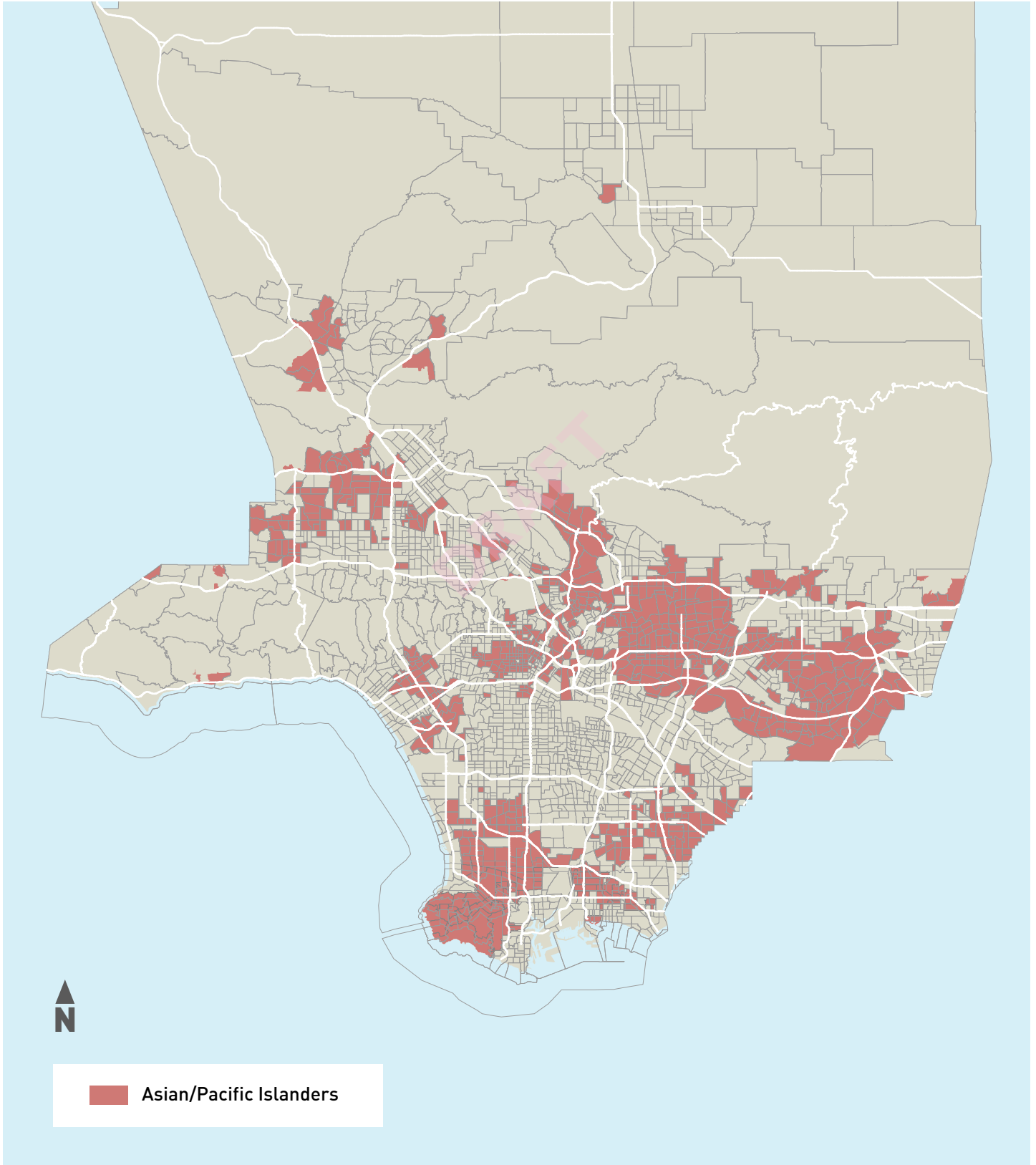


Source: U.S. Census Bureau 2013–2017 American Community Survey (ACS), 5-Year Estimates, Table B03002



Figure 53

## ASIAN/PACIFIC ISLANDER POPULATION



Source: U.S. Census Bureau 2013–2017 American Community Survey (ACS), 5-Year Estimates, Table B02001

## Job Accessibility

Figure 54 illustrates, by income quintile, the percentage of jobs that can be made via transit in a sixty-minute period. Low-income TAZs are expected to benefit the most from transit accessibility as the 49.4 percent of jobs that can be reached via transit in the Future Trend scenario are expected to improve to 62.0 percent in the Measure M scenario, and to 65.2 percent with the 2020 Plan scenario. All income quintiles are expected to see an improvement in transit accessibility with implementation of the 2020 Plan.

Figure 54  
**Job Accessibility by Income Quintile**



\*Percent of jobs within 60 minutes transit travel time during peak periods

Figure 55 displays the job accessibility by population subgroup. The transit-dependent population is expected to benefit the most from the 2020 Plan with 43 percent of jobs accessible within 60 minutes of transit in the Trend, 56 percent in Measure M, and 60 percent with the Plan. All other population subgroups are expected to see an increase in transit accessibility as well.

Figure 55  
**Job Accessibility by Population Subgroup**



\*Percent of jobs within 60 minutes transit travel time during peak periods

## Mode Choice

Figure 56 illustrates, by income quintile, the mode split of home-to-work trips. Transit usage is expected to be higher for low-income households compared to other income groups in Trend scenario (18 percent), increasing to 20 percent for the Measure M scenario, and to 27 percent for the 2020 Plan scenario. All other income quintiles are also expected to experience an increase in transit usage as well.

Figure 57 displays the mode choice by population subgroup. The transit-dependent population is expected to increase transit usage from 13 percent in the Trend scenario to 15 percent in the Measure M scenario, and to 21 percent with the 2020 Plan. The non-minority populations also will see an increase from approximately 6 percent in the Trend scenario to about 8 percent in the Measure M scenario, and 11 percent in the 2020 Plan scenario. All other population subgroups are expected to increase transit usage as well.

Figure 56  
Mode Choice by Income Quintile

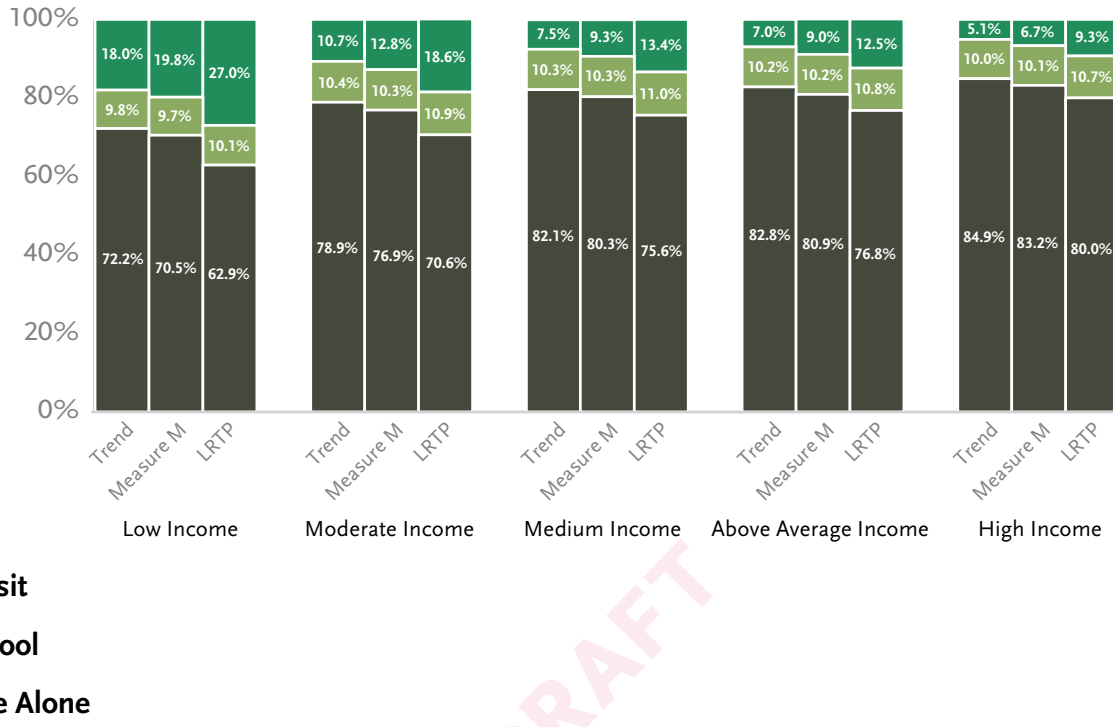
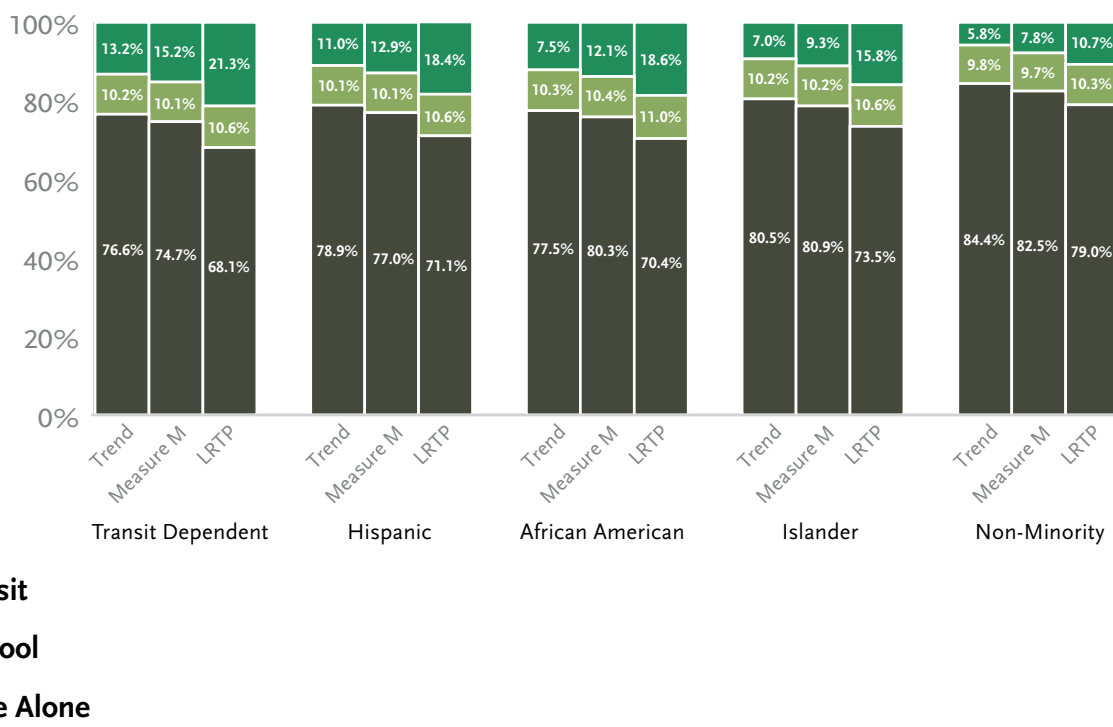


Figure 57  
Mode Choice by Population Subgroup



# Ongoing Monitoring

Ongoing monitoring of system performance is important to understanding how the region is changing over time and how effective Metro's programs and policies are at addressing our goals. The LRTP is a living document that can be amended as necessary; however, historically the LRTP has been updated approximately every six to eight years. As the region experiences changes every year, there are a subset of performance measures that are monitored more frequently to understand how the current conditions of our transportation system evolve.

The performance measures included in the 2020 LRTP are varied and can be categorized in different ways depending on the type (outcome vs process-oriented), the data utilized, and what Metro can and cannot influence. While some measures are more meaningful to track over time, others are better suited for forecasting and comparing alternative future scenarios. Some measures are clearly within Metro's control, while others are influenced by several competing regional factors.

Figure 58 displays each performance measure and the data source.

Measures that Metro should track on a regular basis should be updated frequently and should be capable of meaningfully changing each year. Metro is committed to establishing an ongoing monitoring framework to track performance measures prior to the next LRTP update.

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Figure 58

## Performance Measures and Data Source

PERFORMANCE MEASURES	DATA SOURCE
Travel time by mode	Metro Travel Demand Model (TDM) (2017)
Travel time reliability by mode	Freeways: Caltrans Performance Measurement System (PeMS)
	Arterials: Metro Arterial Performance Measurement Tool
Percent of households and jobs within 10-minute walk or roll of high-quality transit	Transit stops: Metro Service Planning GIS Data
	Households: US Census Bureau ACS (2017)
	Jobs: US Census Transportation Planning Products
Transit competitiveness (vs. driving) in key travel markets	Metro Travel Demand Model (2017)
	Data from NextGen Bus Study
Person travel hours in non-SOV modes	Metro Travel Demand Model (TDM) (2017)
Active transportation mode share	National Household Travel Survey (2017) – California Add-On
	US Census Bureau ACS (2017)
Collisions by mode by severity	Statewide Integrated Traffic Records System (SWITRS)
Miles of protected bicycle pathways and sidewalks within ½ mile of high quality transit	Existing & Planned Bicycle Facilities - Metro GIS (2018)
	Sidewalks – No Inventory Currently Available
	Metro rail stations and bus stops – Metro GIS
Part I & II crimes reported on Metro transit system	LA Police Department (LAPD) (2018)
	LA Sheriff's Department (LASD) (2018)
	Long Beach Police Department (LBPD) (2018)
Customer satisfaction with Metro bus, rail, and Express Lanes systems	Metro On-Board Customer Satisfaction Survey
Travel time by mode in EFCs	Metro Travel Demand Model (TDM) (2017)
	Metro Equity Focus Communities (2019)
Percent of EFC households within 10-minute walk or roll of high quality transit	Transit stops: Metro Service Planning GIS Data
	Households: US Census Bureau ACS (2017)
	Jobs: US Census Transportation Planning Products
	Metro Equity Focus Communities (2019)
Collisions by mode and severity in EFCs	Statewide Integrated Traffic Records System (SWITRS)
	Metro Equity Focus Communities (2019)
Miles of protected bicycle pathways and sidewalks within ½ mile of high quality transit in EFCs	Existing & Planned Bicycle Facilities – Metro GIS (2018)
	Sidewalks – No Inventory Currently Available
	Metro rail stations and bus stops – Metro GIS
	Metro Equity Focus Communities (2019)
Affordable housing within ½ mile of high quality transit in EFCs	California Housing Partnership - LA County Annual Housing Outcome Report (2018)
	Metro Equity Focus Communities (EFCs)
Percent of household income spent on combined transportation and housing costs in EFCs	US Census Bureau ACS (2017)
	Metro Travel Demand Model (2017)
	Equity Focus Communities (2019)



PERFORMANCE MEASURES	DATA SOURCE
Air quality pollutants in EFCs	California Air Resources Board EMFAC 2017 Web Database (v 1.0.2)
	Metro Travel Demand Model (TDM) (2017)
	Metro Equity Focus Communities (EFCs)
Percent of activity centers in EFCs within 10-minute walk or roll of high quality transit	LA County Location Management System (LMS) (2016)
	Metro rail stations and bus stops – Metro GIS
	Metro Equity Focus Communities (EFCs)
Percent of roads and highway bridges in good and fair condition in EFCs	Caltrans Automated Pavement Condition Survey Report (APCS), Caltrans Pavement Management System (PaveM),
	City and county pavement management systems
	Federal Highway Administration (FHWA) Highway Performance Monitoring System (HPMS)
	Metro Equity Focus Communities (EFCs)
Affordable housing within 1/2 mile of high quality transit	California Housing Partnership - LA County Annual Housing Outcome Report (2018)
Percent of household income spent on combined transportation and housing costs	US Census Bureau ACS (2017)
	Metro Travel Demand Model (2017)
Jobs within 1/2 mile of high quality transit	US Census Bureau's Census Transportation Planning Products
	Metro Service Planning data
Regional economic growth attributable to transportation investments	Metro Travel Demand Model (2017)
	Metro Financial Model
	Regional Economic Models Inc (REMI) TranSight
Regional jobs attributable to transportation investments	Metro Travel Demand Model (2017)
	Regional Economic Models Inc (REMI) TranSight
GHG emissions	California Air Resources Board EMFAC 2017 Web Database (v 1.0.2)
	Metro Travel Demand Model (TDM) (2017)
Air quality pollutants	California Air Resources Board EMFAC 2017 Web Database (v 1.0.2)
	Metro Travel Demand Model (TDM) (2017)
Percent of activity centers within 10-minute walk or roll of high quality transit	LA County Location Management System (LMS) (2016)
	Metro rail stations and bus stops – Metro GIS
Active transportation mode share	National Household Travel Survey (2017) – California Add-On
	US Census Bureau ACS (2017)
Vehicle hours of delay per capita	Metro Travel Demand Model (TDM) (2017)
Vehicle miles traveled per capita	Metro Travel Demand Model (TDM) (2017)
Total person throughput	Metro Travel Demand Model (TDM) (2017)
Average roadway incident clearance time	California Highway Patrol (CHP) Incident Logs from the Caltrans Performance Measurement System (PeMS)

PERFORMANCE MEASURES	DATA SOURCE
Annual transit trips	Metro Travel Demand Model (TDM) (2017)
Mode share	Metro Travel Demand Model (TDM) (2017)
	National Household Travel Survey – California Add-On (2017)
Truck vehicle hours of delay	Metro Travel Demand Model (TDM) (2017)
Truck travel time reliability	Freeways: Caltrans Performance Measurement System (PeMS)
	Arterials: Metro Arterial Performance Measurement Tool
Percent of roads and highway bridges in good and fair condition	Caltrans Automated Pavement Condition Survey Report (APCS), Caltrans Pavement Management System (PaveM)
	City and county pavement management systems (if available)
	Federal Highway Administration (FHWA) Highway Performance Monitoring System (HPMS)
Percent of backlog to state-of-good-repair funding needs to address transit assets past useful life	Metro Transit Asset Management Database
Legal and policy reports issued on time	Metro internal records from Metro Office of Management and Budget and Metro Management Audit Services Division (MASD)

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# Subregional Profiles

LA County's 10 million residents are dispersed across nine subregions, each containing many jurisdictions, communities, and neighborhoods. Although each subregion has distinct characteristics, taken together they share common needs and challenges, particularly when it comes to transportation and quality of life. The partnership between the subregions and Metro is interdependent and collaborative, resulting in the development and implementation of creative transportation solutions for LA County.

This chapter addresses the unique transportation challenges throughout the County by subregion and the transportation solutions that were developed through a collaborative approach as part of the process to get Measure M, a half-cent sales tax with no sunset, approved. Each subregion's unique transportation needs are informed by their existing population, employment, land use, and major transportation infrastructure. Future transportation investment by subregion is informed by the 2014 Measure M process in which subregional working groups developed goals for analyzing unmet transportation needs. The process ultimately resulted in a project list that met the expected revenue generated by the tax measure.

Metro is committed to working with all of the subregions and cities to address transportation priorities based upon the issues and objectives they have developed, as well as any other issues that may arise.

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For planning purposes, LA County cities and communities are identified geographically by nine distinct, diverse, and vibrant subregions generally based on the existing Councils of Government (COGs) boundaries that range from 60 to 2,500 square miles in area. Some subregions are small, cooperative efforts staffed by city representatives; others are formalized COGs with paid staff; and some are geographic sub-sections of the City of Los Angeles.

In developing this chapter, subregional agencies were engaged early in the process to capture their insight on the unique transportation issues and challenges facing each subregion. The subregions are:

- > Arroyo Verdugo Cities
- > Central Los Angeles
- > Gateway Cities
- > Las Virgenes/Malibu
- > North Los Angeles County
- > San Fernando Valley
- > San Gabriel Valley
- > South Bay Cities
- > Westside Cities

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Figure 59 illustrates the subregions in the County.

In January 2015, the Board approved the separation of major airports and seaports (including LAX, Long Beach Airport, Burbank Bob Hope Airport, Palmdale Regional Airport, and the Ports of Los Angeles and Long Beach), as well as Los Angeles Union Station into a Regional Facilities Planning Area, because improvements to these regional facilities benefit the entire county. Regional facilities are separate for funding purposes, but will be displayed within the Metro Subregional Planning Area Boundaries for LRTP Update data purposes, including travel demand modeling and census-based population data.

Figure 59

**LOS ANGELES COUNTY SUBREGIONS**





# Arroyo Verdugo Cities

The Arroyo Verdugo subregion includes Burbank, Glendale, Pasadena, South Pasadena, La Cañada Flintridge and La Crescenta-Montrose, a Census designated place. The region sits against a backdrop of the San Gabriel Mountains, on the northern edge of the Los Angeles Basin.

## Major Transportation Facilities

Several major freeways traverse this subregion, including the Foothill (I-210), Glendale (SR-2), Golden State (I-5), and Ventura (SR-134) Freeways. Bus service in the subregion is provided by Metro and LADOT, as well as by local transit service providers in each of the member cities. Metro's L (Gold) Line provides rail service to communities in the eastern portion of the subregion. Metrolink's Ventura County and Antelope Valley Lines provide commuter rail services to Burbank and Glendale. Limited Amtrak service is also available. Burbank, Glendale, and La Cañada Flintridge provide paratransit services within their cities for the elderly and persons with disabilities. Service in La Cañada Flintridge is administered by the City of Glendale. Access Services, Inc. provides paratransit service in Arroyo Verdugo as part of its region-wide service.

## Land Use and Demographics

Roughly 7 percent of the subregion is designated for commercial/industrial land use, and residential land use covers approximately 40 percent. The City of South Pasadena has the highest percentage of residential land use, while the largest total residential land use is located in the City of Pasadena. The largest industrial land use (by total area and percentage) can be found in the City of Burbank. Burbank also has a large percentage of commercial land use.

Bob Hope Airport is located in the City of Burbank. The airport can be reached by the I-5 Freeway or Metrolink rail. Hospitals in the subregion include Glendale Memorial Hospital, USC Verdugo Hills Hospital, Adventist Health Hospital, Huntington Hospital, Shriners for Children Medical Center, and Saint Joseph Medical Center. The subregion is also home to one of the world's most prestigious universities, California Institute of Technology. The city of Burbank, billed as the "Media Capital of the World", has numerous media and entertainment companies' headquarters and production facilities.

Figure 6o  
**ARROYO VERDUGO SUBREGION**



Population densities tend to cluster along SR-134, I-5, and the Metro Gold Line. High population density areas can be found south of the Verdugo Mountains and east of San Rafael Hills. The City of South Pasadena is the smallest city by total area but has the highest population density in the subregion. High employment densities can also be found along the freeways and fixed guideways. The City of Burbank has the highest employment density and one of the largest commercial land use areas in the subregion. The City of Glendale is the largest city in the subregion by area and total population. The city ranks 2nd in population density and 3rd in employment/trip densities within the subregion. Employment centers can be found near major thoroughfares in the Cities of Burbank, Glendale, and Pasadena.

Arroyo Verdugo is the smallest subregion in the County covering 87 square miles and is home to five cities and unincorporated LA County. The subregion ranks 8th (out of 9) in total population, 7th in total employment, and 7th in total daily trips. The subregion is predominately non-Hispanic Whites and ranks 4th in the County for average median household income.

## Major Projects and Programs

When the Metro Board of Directors approved Measure M, they approved a set of projects, programs, and local return funding for each subregion. The North Hollywood to Pasadena Transit Corridor connecting the L line (Gold) in Pasadena to the B Line (Red) and G Line (Orange) in North Hollywood is the subregion's major project in the Los Angeles County Traffic Improvement Program and anticipated to open in 2026. The substantial Subregional Programs in the region include highway efficiency, noise mitigation and arterial projects valued at over \$600 million (in 2015 \$) and transit projects valued at over \$250 million (in 2015 \$).

Figure 61

## Arroyo Verdugo Projects and Multi-year Subregional Programs

CATEGORIES	DESCRIPTION
Major Project (YOE \$)	North Hollywood to Pasadena Transit Corridor \$315 M (2026)
Multi-year Subregional Programs (in 2015 \$)	Modal Connectivity and Complete Streets Projects \$202 M (Start Date FY 2018) Transit Projects \$257.1 M (Start Date FY 2018) Active Transportation Projects \$136.5 M (Start Date FY 2033) Goods Movement Projects \$81.7 M (Start Date FY 2048) Highway Efficiency, Noise Mitigation, and Arterial Projects \$602.8 M (Start Date FY 2048) Arroyo Verdugo Projects to be Determined \$110.6 M (Start Date FY 2048)

Source: [https://theplan.metro.net/wp-content/uploads/2016/09/FactSheet\\_Arroyo\\_Verdugo.pdf](https://theplan.metro.net/wp-content/uploads/2016/09/FactSheet_Arroyo_Verdugo.pdf)

Figure 62

**ARROYO VERDUGO DAILY TRIPS**

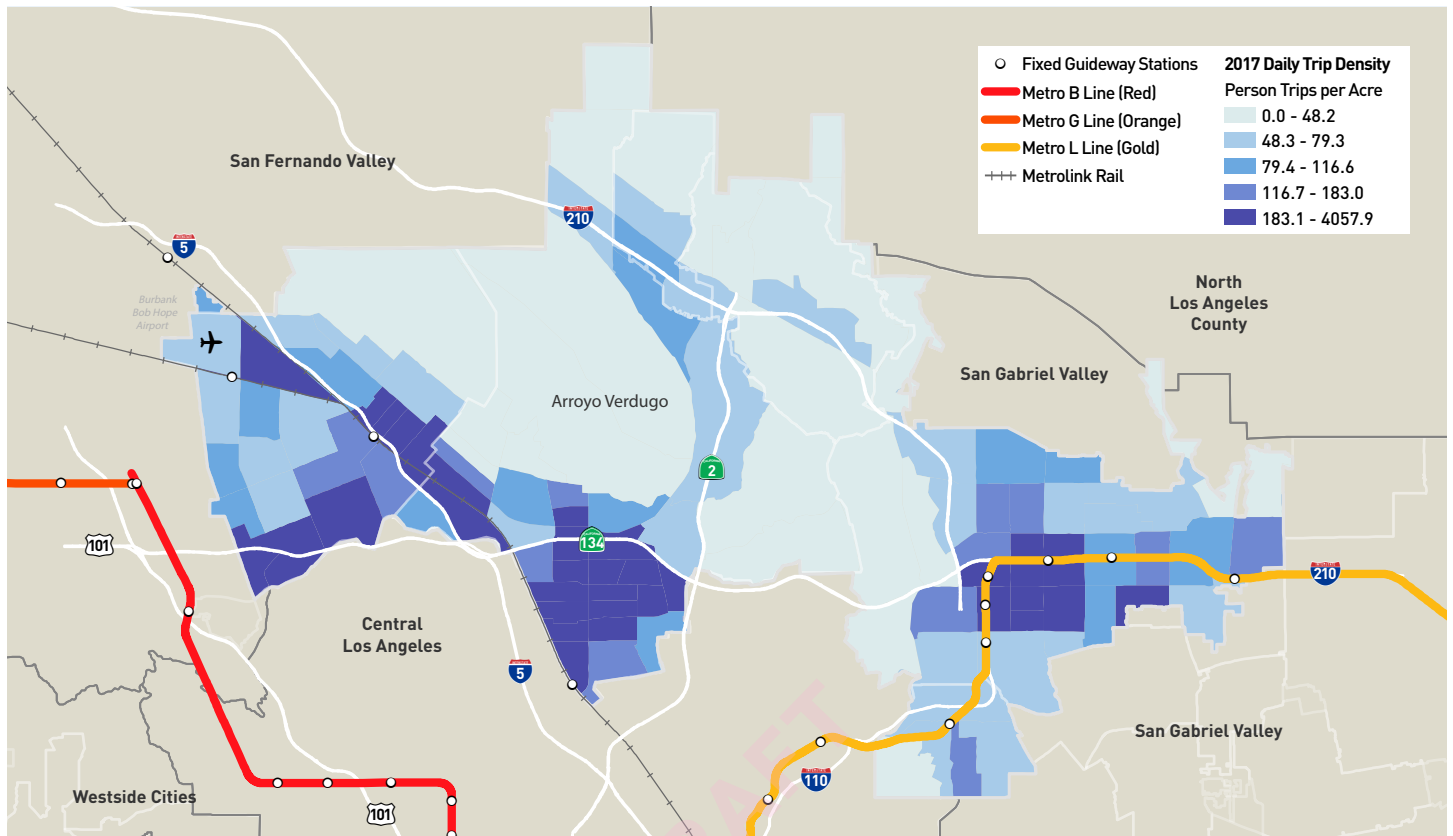


Figure 63

**ARROYO VERDUGO EMPLOYMENT DENSITY**

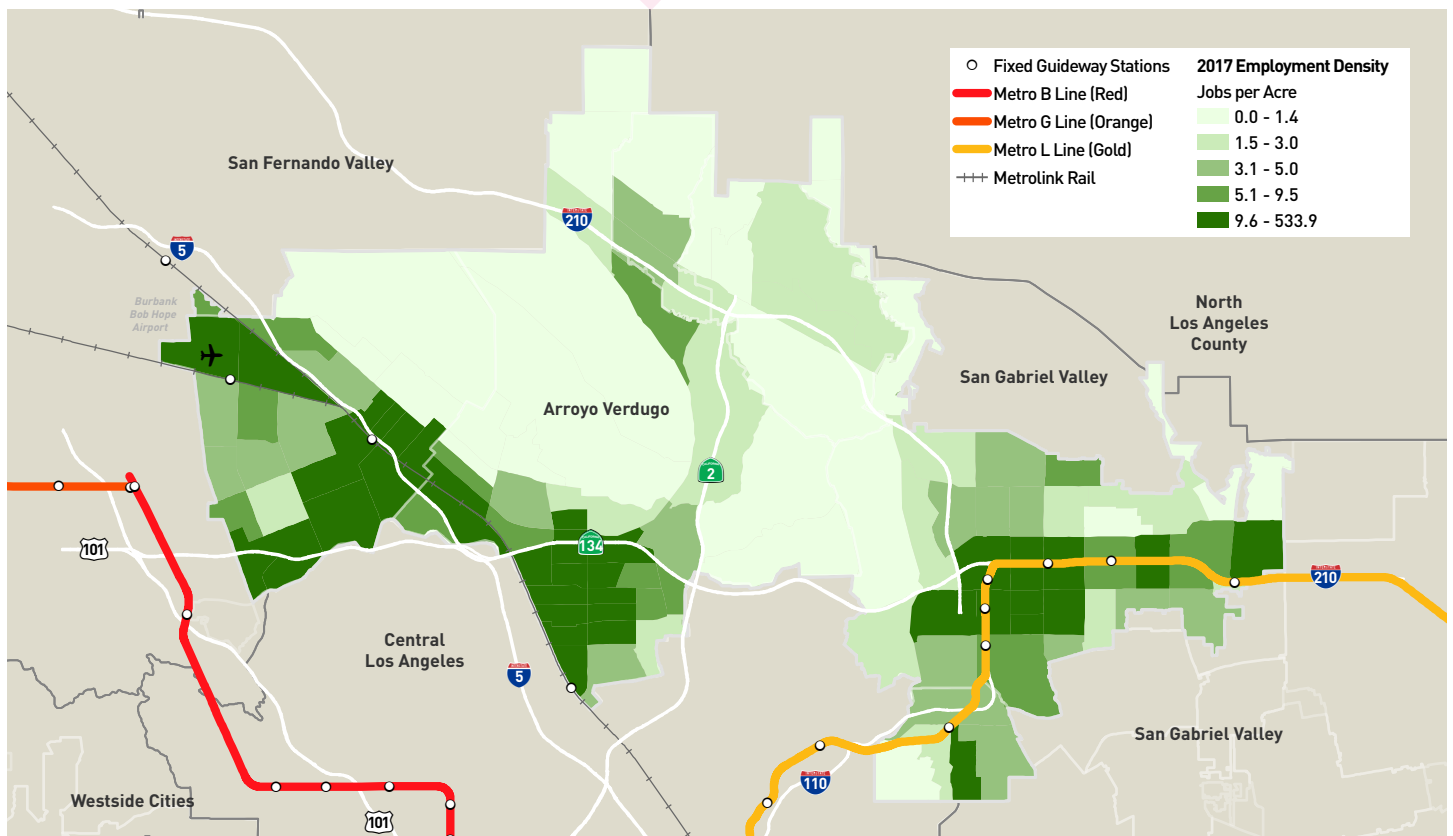


Figure 64

### ARROYO VERDUGO POPULATION DENSITY

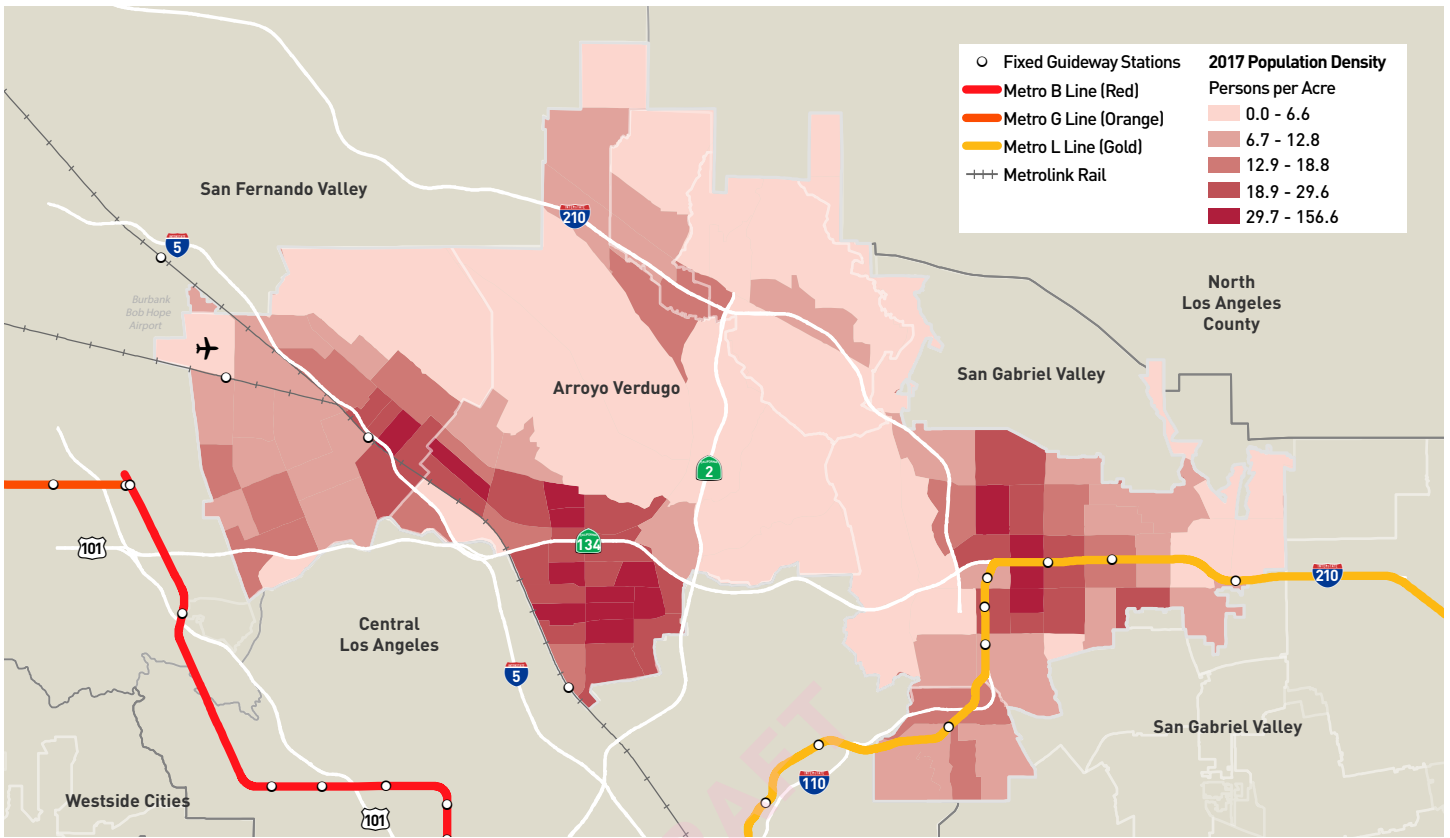


Figure 65

### ARROYO VERDUGO LAND USE

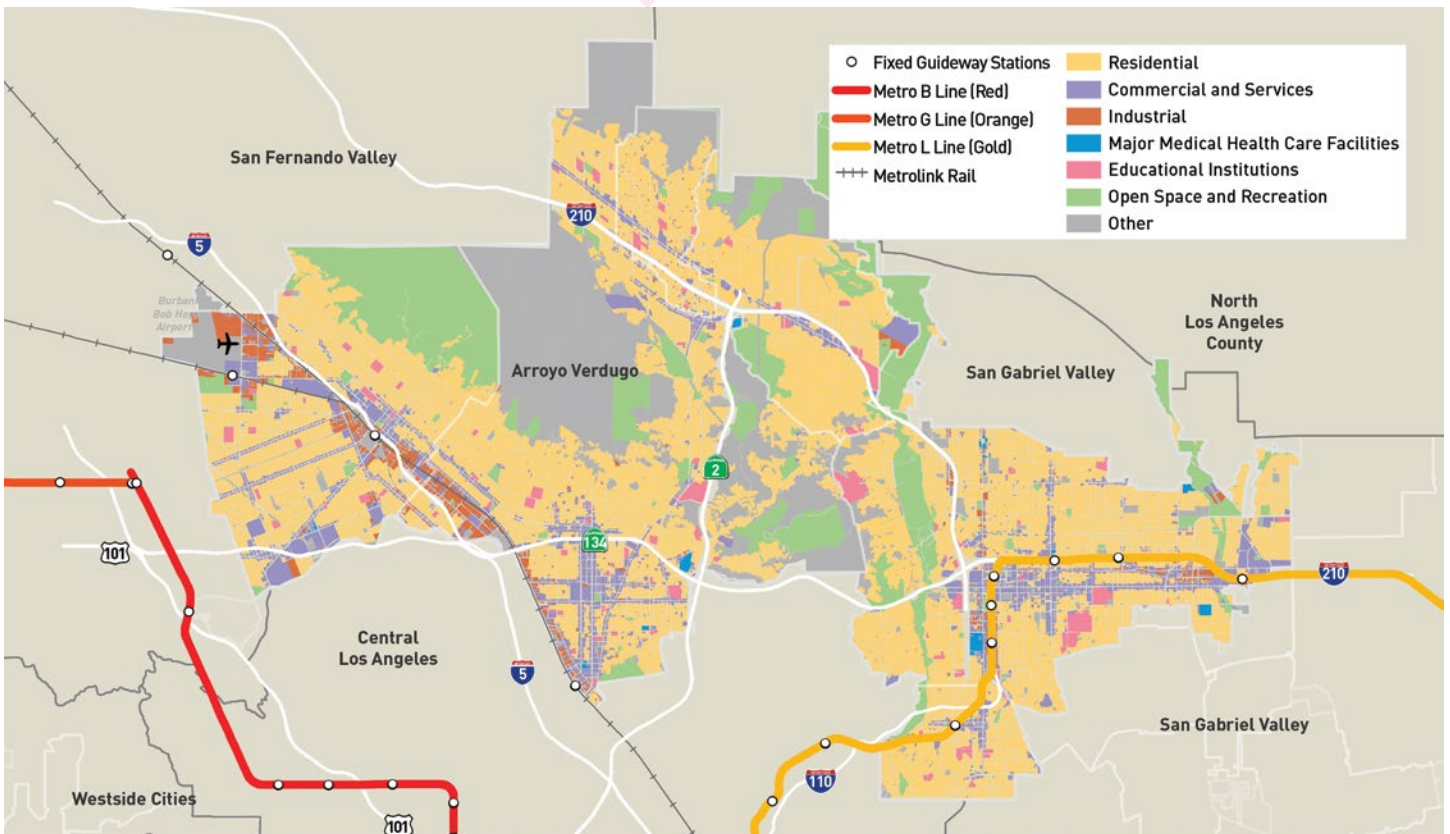


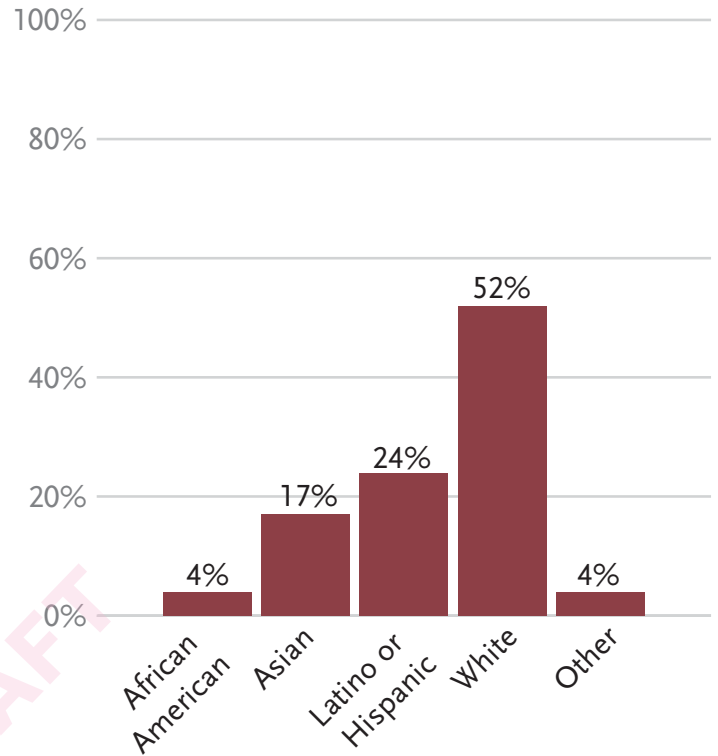
Figure 66

**Arroyo Verdugo Summary Demographics**

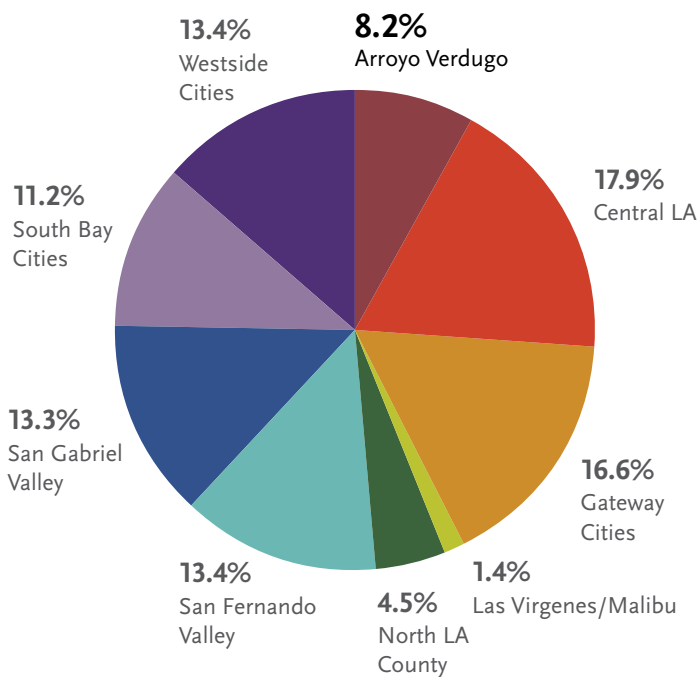
Total Area 87 Square Miles, Rank 9th  
(Out of 9 Subregions)



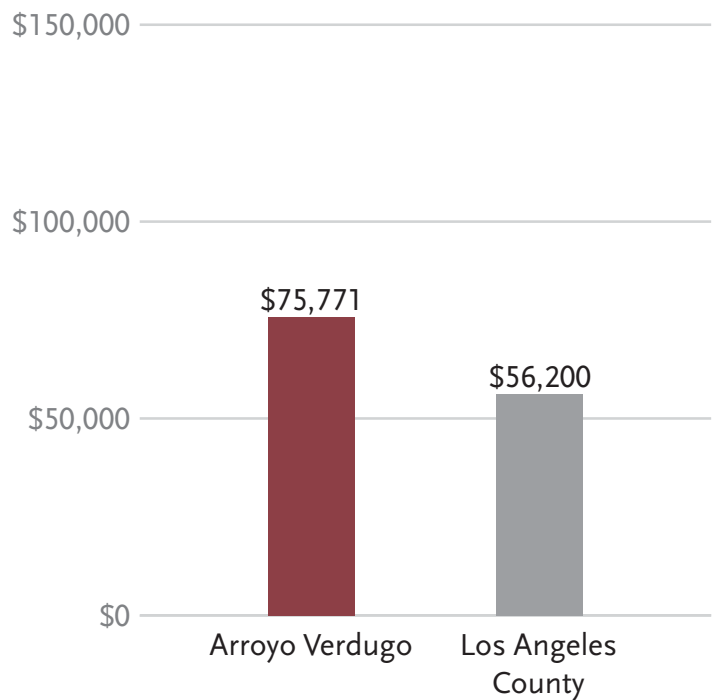
Total Population 509,273 People, Rank 8th



Total Employment 362,301 Jobs, Rank 7th



Median Household Income \$75,771 Average MHI, Rank 4th





# Central Los Angeles

The Central Los Angeles subregion encompasses many communities in the City of Los Angeles including Atwater Village, Baldwin Hills, Boyle Heights, Central City, Chinatown, Eagle Rock, Echo Park, El Sereno, Glassell Park, Hancock Park, Highland Park, Hollywood, Hollywood Hills, Koreatown, Leimert Park, Little Tokyo, Arts District, Miracle Mile, Mid-City, Mt. Washington, Silver Lake, South Park, University Park, West Adams, Wilshire Center and portions of South-Los Angeles. The subregion also includes unincorporated areas of East Los Angeles, Ladera Heights, and View Park-Windsor Hills.

## Major Transportation Facilities

A total of eight freeways and two busways pass through the subregion. They include Harbor Freeway (I-110), Glendale Freeway (SR-2), Golden State/Santa Ana Freeway (I-5), Santa Monica/San Bernardino Freeway (I-10), Pomona Freeway (SR-60), Ventura Freeway (SR-134), Hollywood Freeway (US-101), and Long Beach Freeway (I-710). The El Monte Busway runs along the San Bernardino Freeway's median and terminates at Alameda St. The Harbor Transitway runs along the Harbor Freeway's median and terminates at Adams Bl.

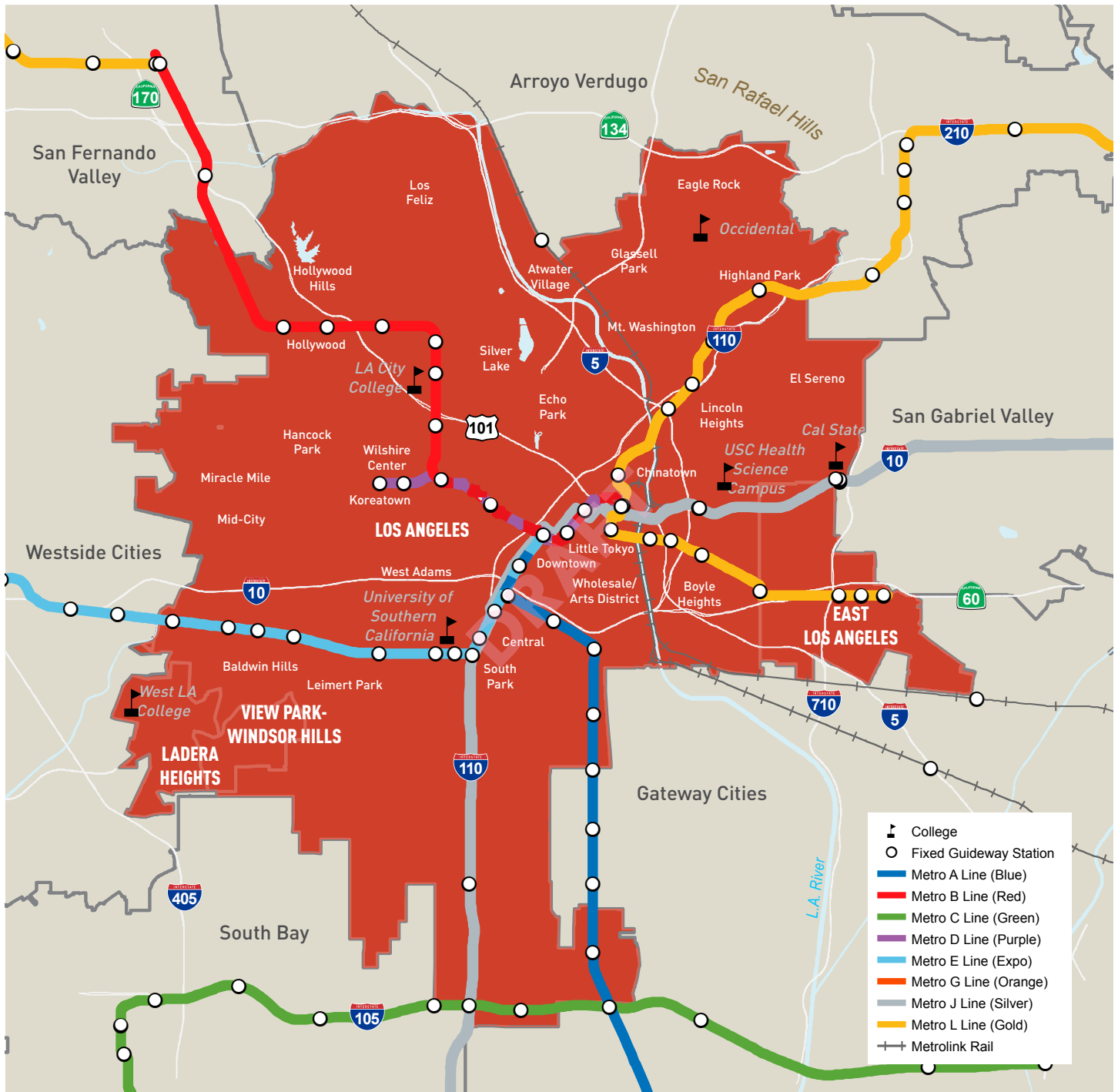
Central Los Angeles is served by most Metro Rail lines, including the B (Red) Line, D (Purple) Line, and L (Gold) Line, all converging upon Union Station. In addition, A (Blue) Line and E (Expo) Line meet nearby at the 7th Street/Metro Center station. At the southern edge of Central Los Angeles, the C (Green) Line connects to the A (Blue) Line. Union Station also serves as the major hub for Metrolink commuter rail service including the 91/Perris Valley Line, Antelope Valley Line, Orange County Line, Riverside Line, San Bernardino Line, and Ventura County Line as well as the Amtrak Pacific Surfliner line.

Ten municipal bus operators serve the Central Subregion, including Metro, Antelope Valley Transit, Foothill Transit, Gardena Municipal Bus Lines, LADOT (Dash and Commuter Express), Montebello Municipal Bus Lines, Orange County Transportation Authority (OCTA), Santa Clarita Transit, Santa Monica Municipal Bus Lines, and Torrance Transit. Currently, Metro operates four Metro Rapid lines within the Central Area (Wilshire Bl/Whittier Bl, South Broadway, Vermont Av and Florence Av). The road infrastructure is built-out and cannot accommodate more road capacity without adverse community impacts.

## Land Use and Demographics

Central Los Angeles covers approximately 138 square miles. Roughly 15 percent is designated for commercial/industrial land use and residential land use covers approximately

Figure 67  
**CENTRAL LOS ANGELES**



40 percent of the subregion. View Park-Windsor Hills has the highest percentage of residential land use, but 10 persons per acre population density. The highest population density is located in the East Los Angeles community. The City of Los Angeles has the largest area for industrial/commercial use and the highest employment density in the subregion.

Higher trip and population density is located in the areas of Hollywood, Echo Park, Koreatown, Silver Lake, Little Armenia, Downtown Los Angeles, and the Fashion District. Population densities tend to cluster around Metro’s Red, Purple, Blue, Silver, and the southern portion of the Gold Line (near the industrial/residential interface of East LA and Boyle Heights). Employment density is clustered in areas between Hollywood and Downtown Los Angeles. Downtown Los Angeles has the highest trip density areas in the subregion.

There are many entertainment attractions located in the subregion including the Hollywood Walk of Fame, L.A. Live, Orpheum Theatre, and Griffith Park/Observatory. The region also has several major sports facilities including the Coliseum, L.A. where the L.A. Rams and USC Trojans play, the Chavez Ravine, home to the Dodgers, and the Staples Center, home to the L.A. Lakers. The symbolic landmark Hollywood sign can be found on Mount Lee and is often viewed by thousands of daily visitors from Griffith Park Observatory. Downtown Los Angeles is the County’s largest employment district, and over the past decade, the site of a considerable expansion of residential, entertainment, and retail development.

Central Los Angeles is also home to several colleges and universities including the University of Southern California, Occidental College and Cal State Los Angeles. In addition, the medical complexes include Kaiser Permanente Los Angeles Medical Center, Childrens Hospital, Hollywood Presbyterian Medical Center, Los Angeles County + USC Medical Center, and USC Keck Hospital.

Central Los Angeles is the focal point of the region’s transportation system. The subregion ranks 2nd in total population, 1st in total employment, and 1st in total daily trips. The population is predominately Hispanic or Latino and has the lowest average median household income in the County. The subregion contains a diverse land use pattern that includes the County’s heaviest concentration of commercial and government offices, major industrial areas along the Los Angeles River, the most densely populated residential communities in the region, and many of the region’s recreational and cultural facilities.

## Major Projects and Programs

The major regional transit projects with initial phases to be completed by the 2028 Olympics include the West Santa Ana Branch Transit Corridor connecting Downtown Los Angeles to the City of Artesia, Vermont Transit Corridor, a proposed BRT along 12.5 miles of Vermont Avenue. The LA River Path – Central LA, an 8-mile path between the Elysian Valley and Maywood through Downtown Los Angeles is anticipated to open between 2026 – 2027. Both the LA Streetscape Enhancement and Great Streets Program and the Public Transit State of Good Repair Program are allocated more than \$400 million in investment in the Central Subregion.

Figure 68

### Central Los Angeles Projects and Multi-year Subregional Programs

CATEGORIES	DESCRIPTION
Major Projects (YOE \$)	West Santa Ana Branch Transit Corridor Phase 1 \$1.25 B (2028) and phase 2, \$5.06 B (2041), (\$6.31 B total cost)
	LA River Path – Central LA \$365 M (2026 – 2027)
	Vermont Transit Corridor \$524 M (2028)
	Crenshaw Northern Extension \$4.74 B (2047)
	Historic Downtown Streetcar \$581 M (2057)
Multi-year Subregional Programs (in 2015 \$)	Active Transportation, First/Last Mile and Mobility Hubs \$215 M (Start Date FY 2018)
	Los Angeles Safe Routes to School Initiative \$250 M (Start Date FY 2033)
	Bus Rapid Transit and First/Last Mile Solutions (e.g., DASH) \$250 M (Start Date FY 2048)
	Freeway Interchange and Operational Improvements \$195 M (Start Date FY 2048)
	LA Streetscape Enhancement and Great Streets Program \$450 M (Start Date FY 2048)
	Public Transit State of Good Repair Program \$402 M (Start Date FY 2048)
	Traffic Congestion Relief/Signal Synchronization \$50 M (Start Date FY 2048)

Source: [https://theplan.metro.net/wp-content/uploads/2016/09/FactSheet\\_Central\\_LA.pdf](https://theplan.metro.net/wp-content/uploads/2016/09/FactSheet_Central_LA.pdf)

Figure 69  
**CENTRAL LOS ANGELES DAILY TRIPS**

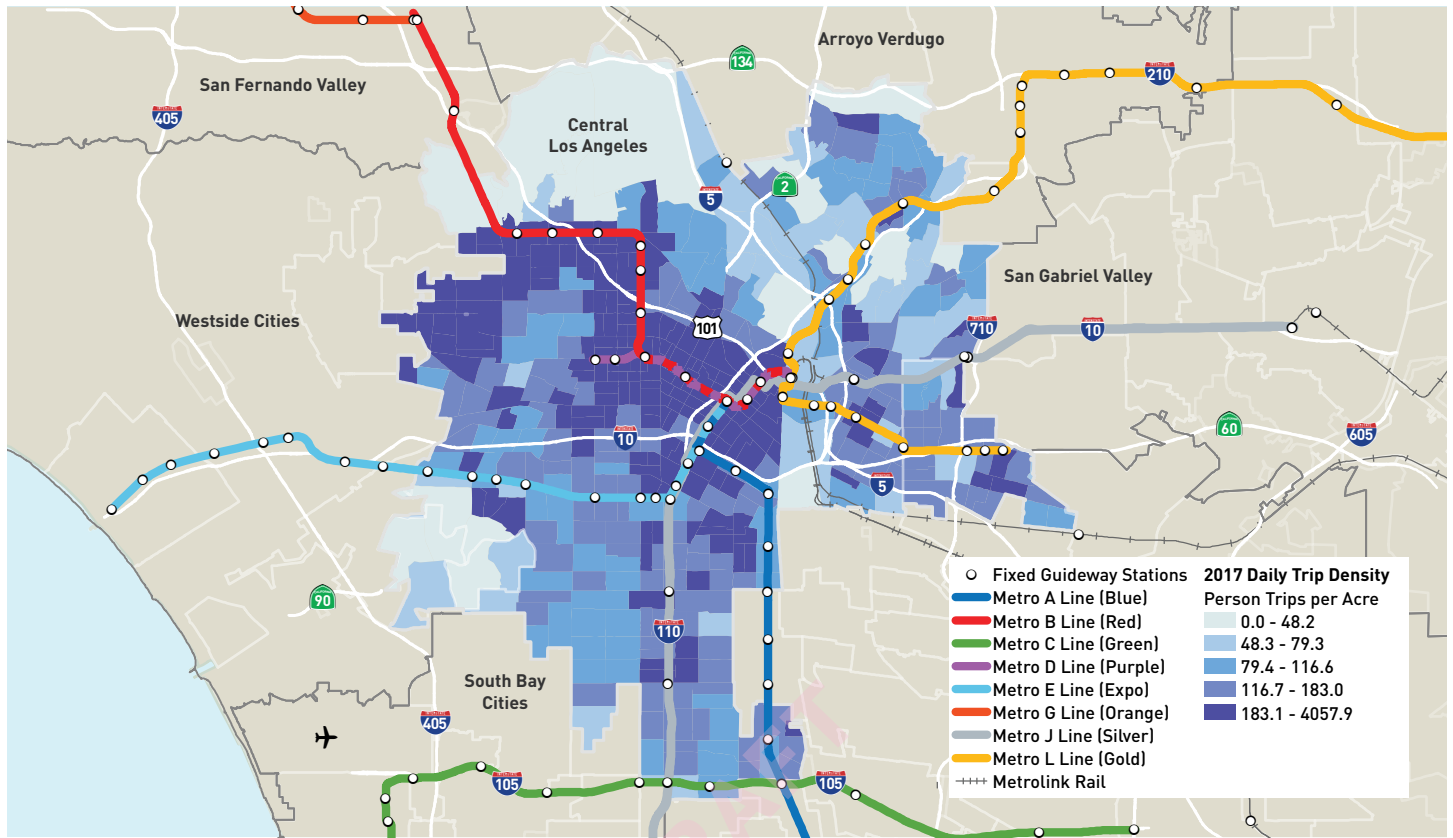


Figure 70  
**CENTRAL LOS ANGELES EMPLOYMENT DENSITY**

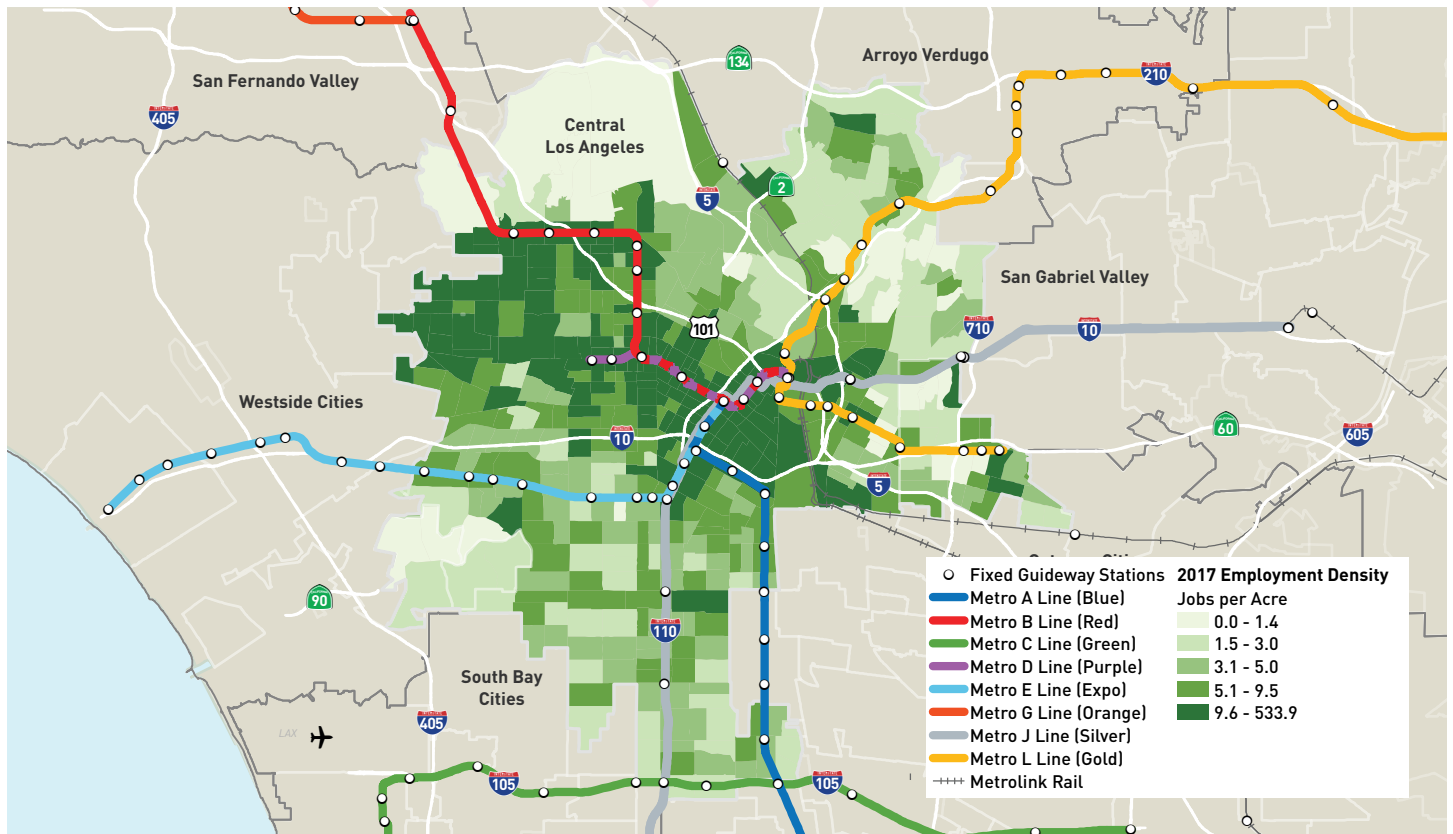




Figure 71

## CENTRAL LOS ANGELES POPULATION DENSITY

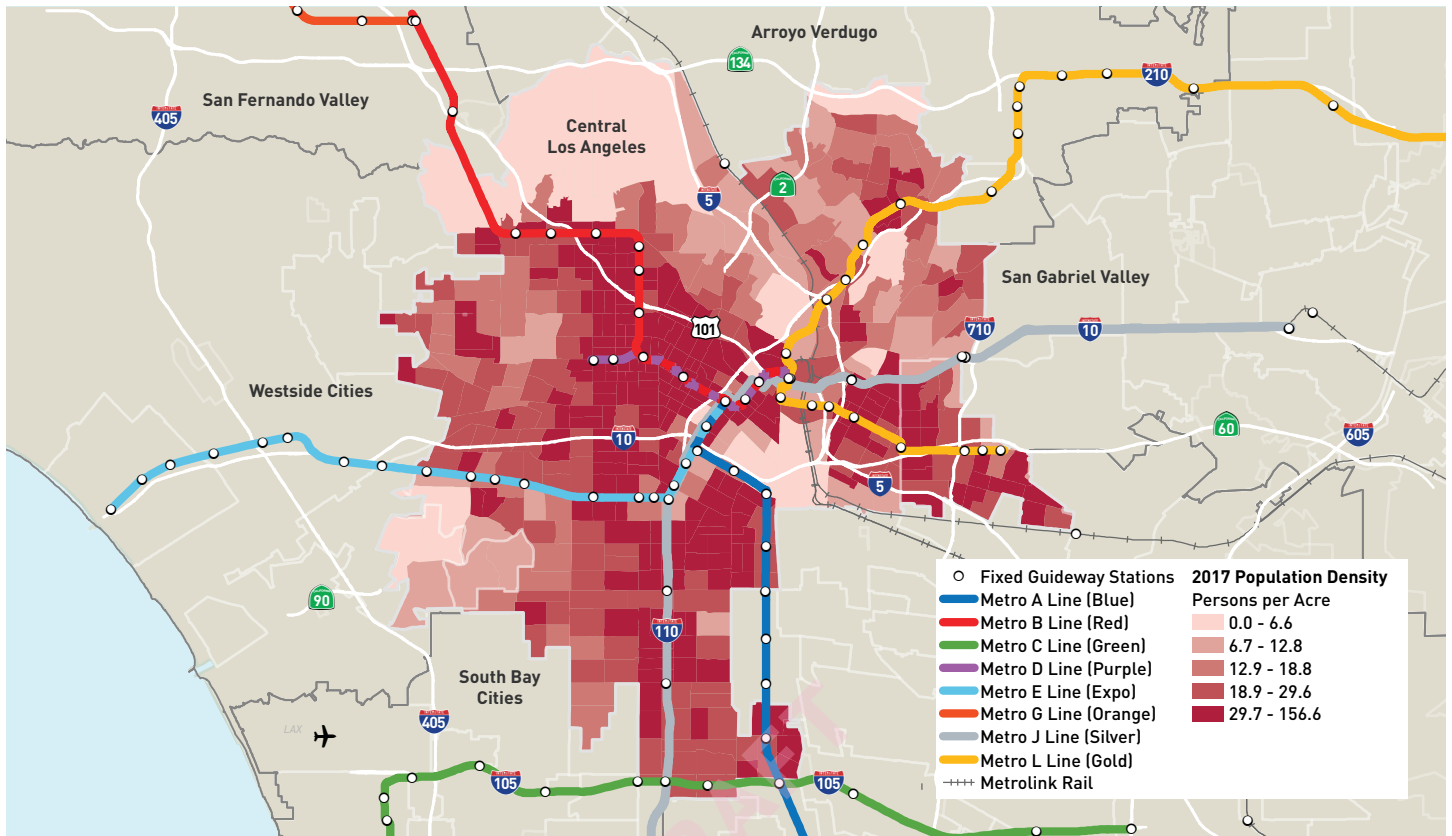


Figure 72

## CENTRAL LOS ANGELES LAND USE

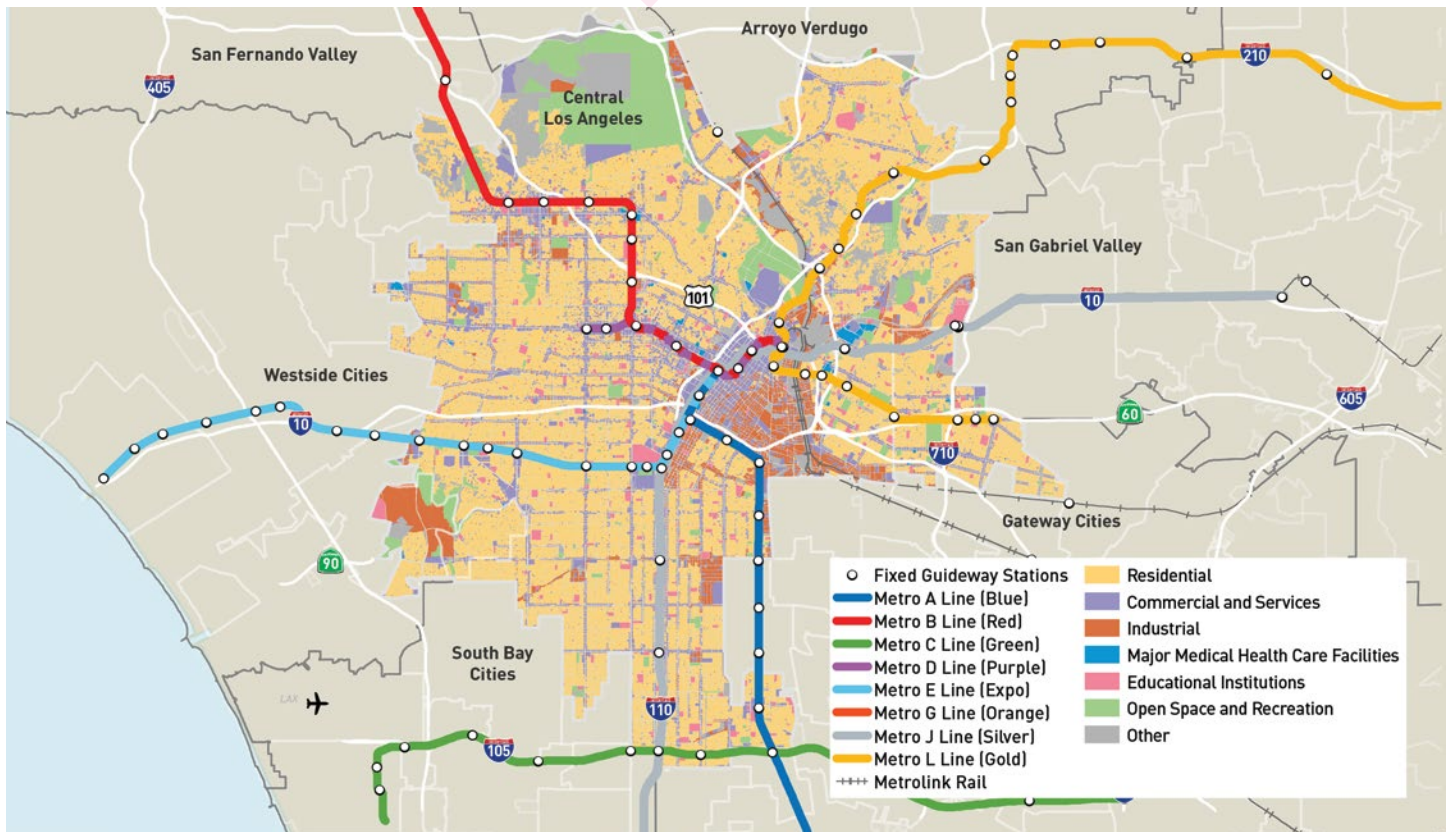


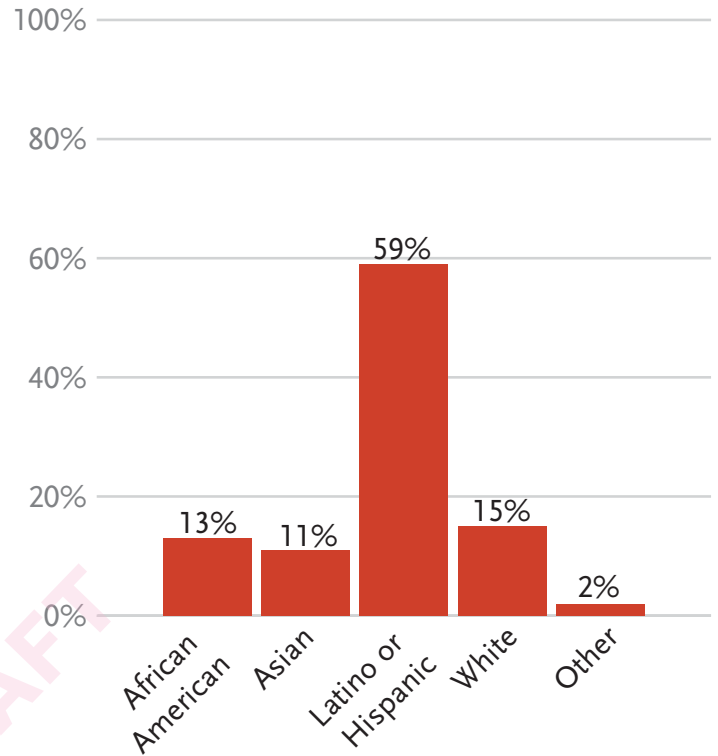
Figure 73

**Central Los Angeles Summary Demographics**

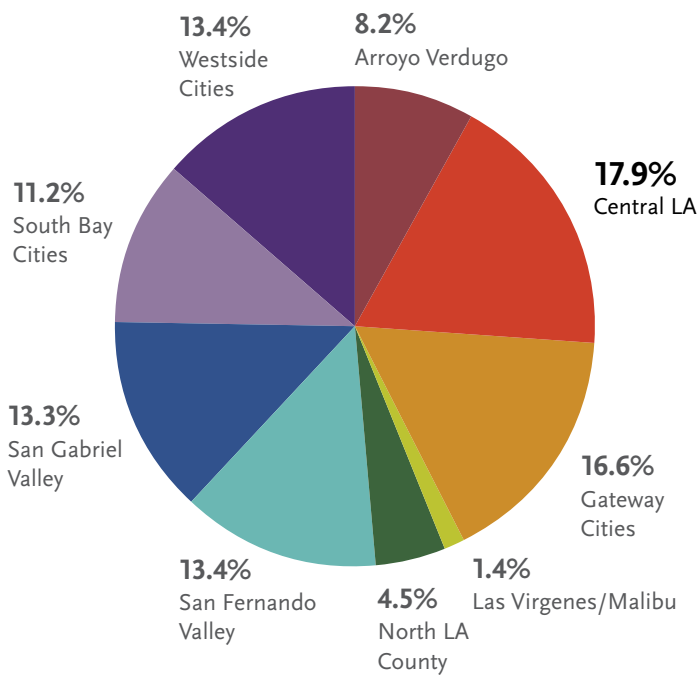
Total Area 138 Square Miles, Rank 7th  
(Out of 9 Subregions)



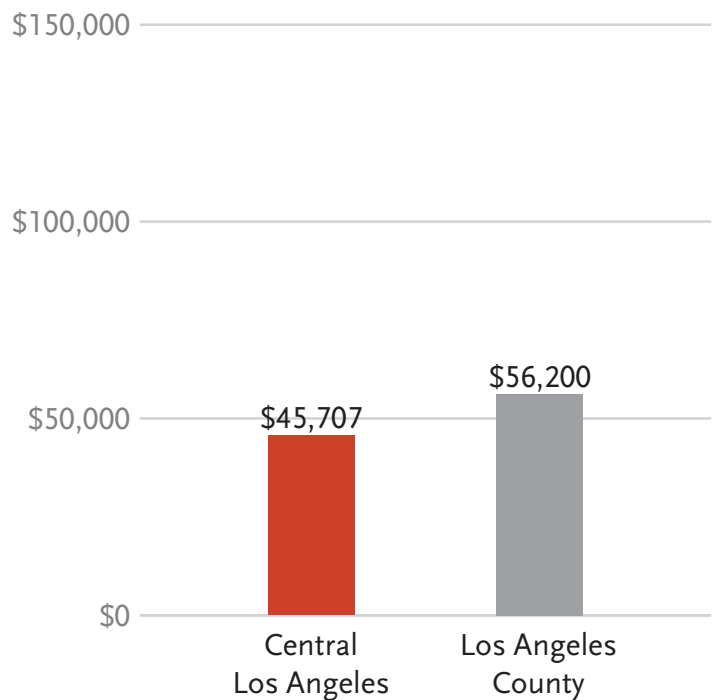
Total Population 1,910,621 People, Rank 2nd



Total Employment 789,312 Jobs, Rank 1st



Median Household Income \$45,707 Average MHI, Rank 9th





# Gateway Cities

The Gateway Cities Subregion include Artesia, Avalon, Bell, Bell Gardens, Bellflower, Cerritos, Commerce, Compton, Cudahy, Downey, Hawaiian Gardens, Huntington Park, La Habra Heights, La Mirada, Lakewood, Long Beach, Lynwood, Maywood, Montebello, Norwalk, Paramount, Pico Rivera, Santa Fe Springs, Signal Hill, South Gate, Vernon, and Whittier. Gateway Cities also contains the following unincorporated communities of LA County: East Rancho Dominguez, East Whittier, Florence-Graham, Rose Hills, South Whittier, Walnut Park, West Rancho Dominguez, West Whittier-Los Nietos, and Willowbrook (portion).

## Major Transportation Facilities

Several major east-west freeway corridors traverse this subregion. These include the Pomona Freeway (SR-60), Artesia Freeway (SR-91), and the Glenn Anderson Freeway (I-105). Santa Ana Freeway (I-5), San Diego Freeway (I-405), Long Beach Freeway (I-710), and San Gabriel River Freeway (I-605) are the major north-south corridors. An airport located in the City of Long Beach serves as a hub of corporate activity. The Port of Long Beach combined with the adjacent Port of Los Angeles constitutes the fifth busiest port in the world and the largest container port in the U.S. The ports are served by the Alameda Corridor, a 20-mile railway designed to speed cargo and containers from the ports to the rest of the country. The ports are also served by the freeway network described above.

The subregion is served by the Metro Blue and Green Light Rail lines as well as the Harbor Transitway running along the I-110. These major transit infrastructure investments help move people to the ports and other employment centers within the subregion.

The subregional bus system consists of Metro Gateway Cities Service Sector, Long Beach Transit, Norwalk Transit, Commerce, and Montebello Municipal Bus lines. In addition, many cities operate transit and dial-a-ride services, such as Cerritos on Wheels (COW) and La Mirada Dial-a-Ride. Metrolink's Orange County Line and the 91-Line provide commuter rail services with stops in Norwalk/Santa Fe Springs and the City of Commerce. Metrolink's Riverside Line provides commuter service with a stop in Montebello/Commerce.

Figure 74  
**GATEWAY CITIES**



## Land Use and Demographics

Gateway Cities covers approximately 311 square miles. Roughly 18 percent is designated for commercial/industrial land use and residential land use covers approximately 37 percent. Figure 79 shows the land use of cities within the subregion. The city of Maywood has the highest percentage of residential land use area while Santa Fe Springs and the city of Vernon contain the highest percentage of commercial/industrial areas.

Trip density and population density cluster in the northwest and southwest areas of the subregion as well as areas between I-710 Freeway and Metro Blue Line. Population densities are dispersed sporadically throughout the region, oftentimes surrounded by high employment density. Bellflower, Downey, Norwalk, Lynwood, Maywood, and Long Beach all have high population density. The city of Vernon has the highest employment density in this subregion. City of Commerce and Santa Fe Springs also have high employment densities with a high percentage of commercial/industrial land use.

Gateway Cities form the southeastern boundary of LA County. This subregion has an approximate resident population of 2 million people within 26 cities and unincorporated areas. Long Beach covers the largest area, ranks 7th in population density, and 5th in employment density within the subregion. Hawaiian Gardens is the smallest city in the subregion, ranking 8th in population density, and 17th in employment density. The subregion also contains industrial-oriented cities, such as Vernon and Commerce; traditional residential suburbs, such as La Habra Heights; and a broad spectrum of balanced communities that fall between. Hospitals in the subregion include Kaiser Permanente Downey and Veteran Affairs Long Beach.

Gateway Cities is the third largest subregion in the County by area, ranks first in total population, second in total employment, and second in total daily trips. The subregion is predominately Hispanic or Latino and has the second lowest average median household income of all the subregions. The region also includes Catalina Island, a sparsely populated destination for tourists and visitors. Universities include Cal State Long Beach.

## Major Projects and Programs

In the coming years the Gateway Cities will see initial investment in several major transit projects and new ExpressLanes on I-105. In addition to the West Santa Ana Transit Corridor, the L line (Gold) and the C line (Green) have planned extensions. Investment to address I-605 “Hot Spot” improvements is the major subregional program.

Figure 75

### Gateway Cities Projects and Multi-year Subregional Programs

CATEGORIES	DESCRIPTION
Major Projects (YOE \$)	West Santa Ana Branch Transit Corridor, \$1.25 B (2028) and \$5.06 B (2041), (\$6.31 B total cost)
	I-710 South Corridor Project phase 1, \$5.7 M and phase 2, \$1.51 M (2041) (\$7.21 B total cost)
	Gold Line Foothill Extension to Claremont \$1.57 B (2028)
	I-5 Corridor Improvements (I-605 to I-710) \$ 2.04 B (2042)
	C Line (Green) Eastern Extension (Norwalk) \$1.89 B (2052)
	I-105 ExpressLane from I-405 to I-605 \$530 M (2025)
Multi-year Subregional Programs (in 2015 \$)	Active transportation Program (Start Date FY 2018)
	I-605 Corridor “Hot Spot” Interchange Improvements \$1 B (\$1.2 B total cost) <sup>1</sup> (Start Date FY 2018)

Source: [https://theplan.metro.net/wp-content/uploads/2016/09/FactSheet\\_Gateway.pdf](https://theplan.metro.net/wp-content/uploads/2016/09/FactSheet_Gateway.pdf)

Figure 76

### GATEWAY CITIES DAILY TRIPS

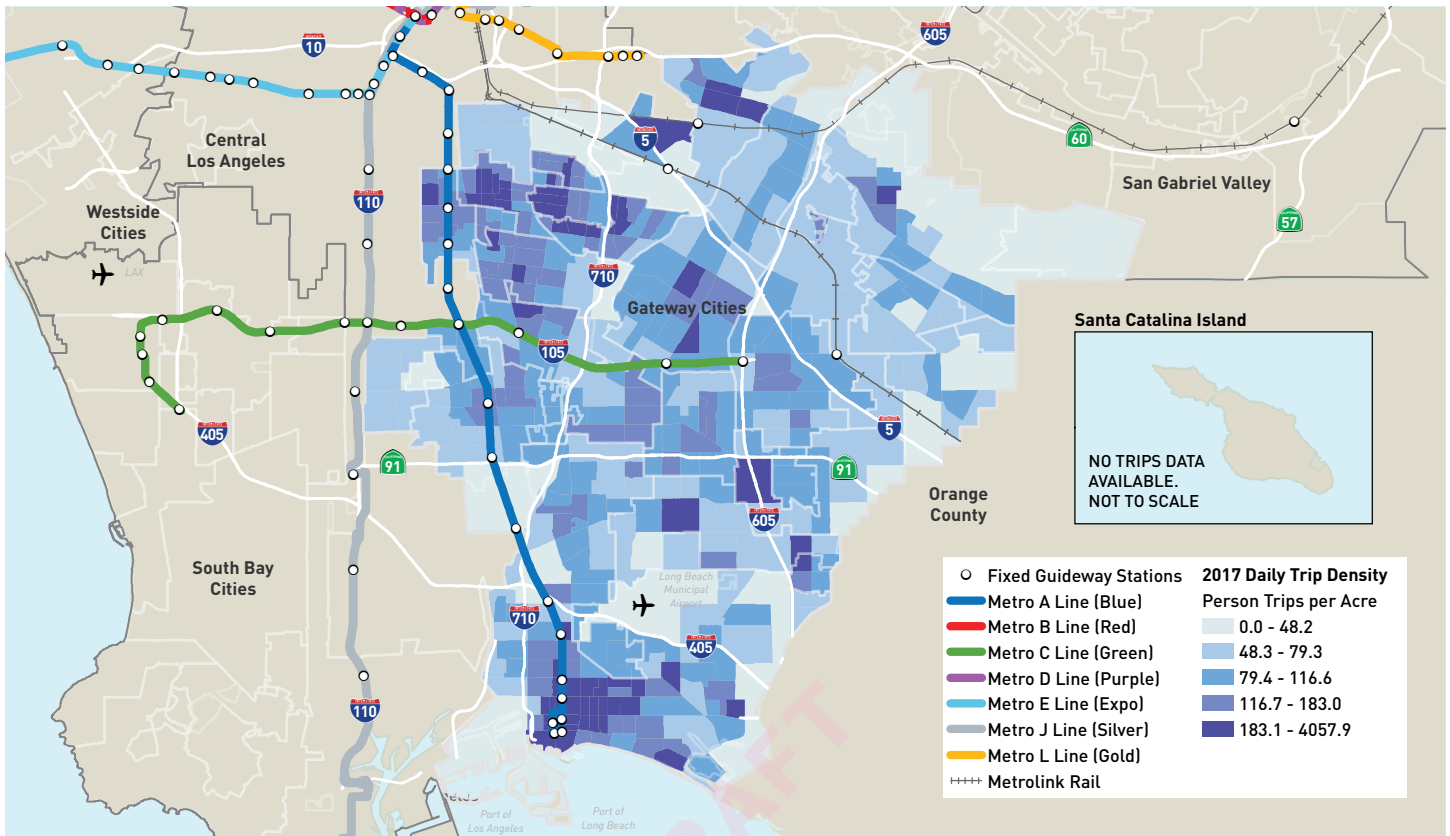


Figure 77

### GATEWAY CITIES EMPLOYMENT DENSITY

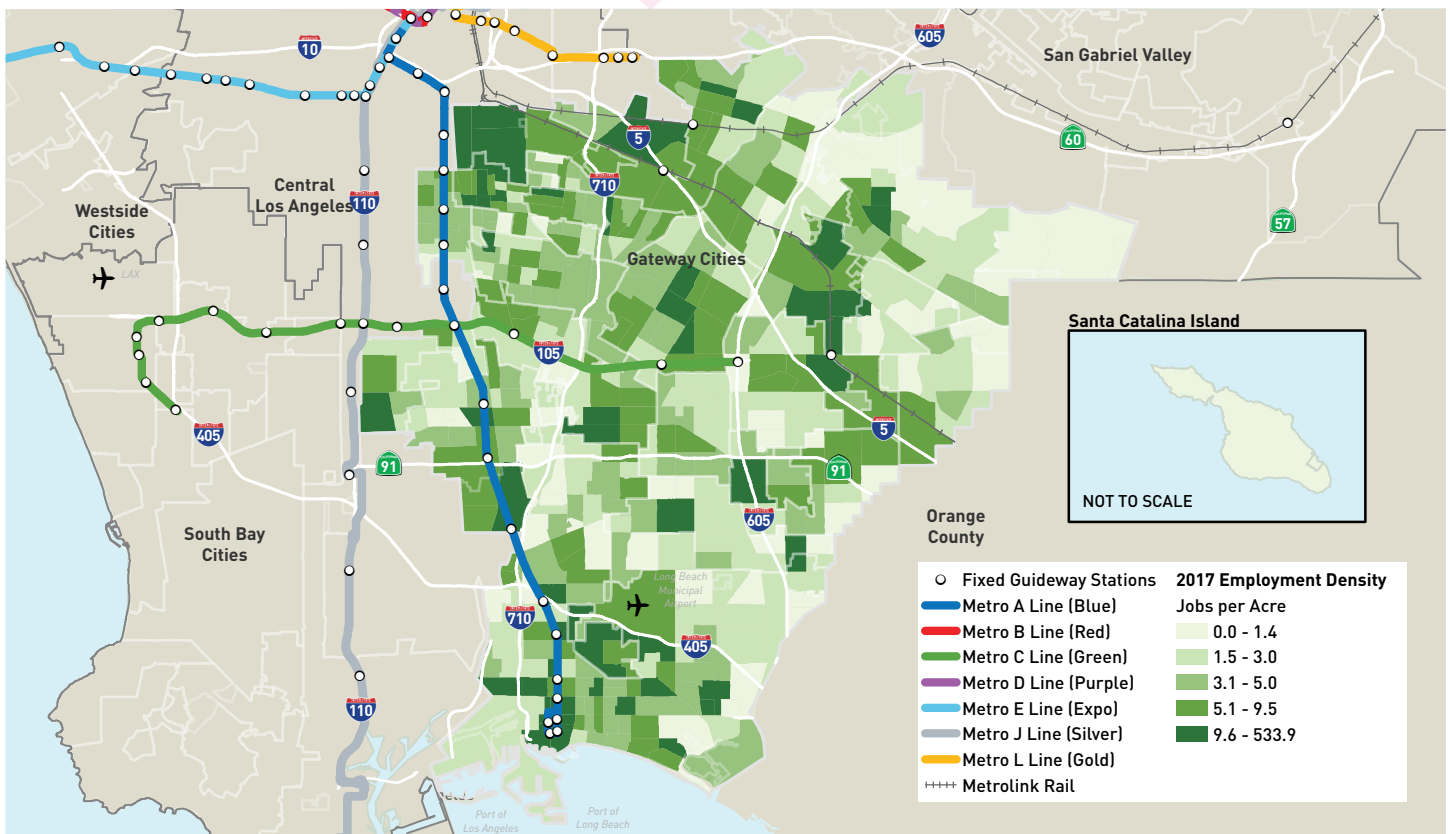




Figure 78

### GATEWAY CITIES POPULATION DENSITY

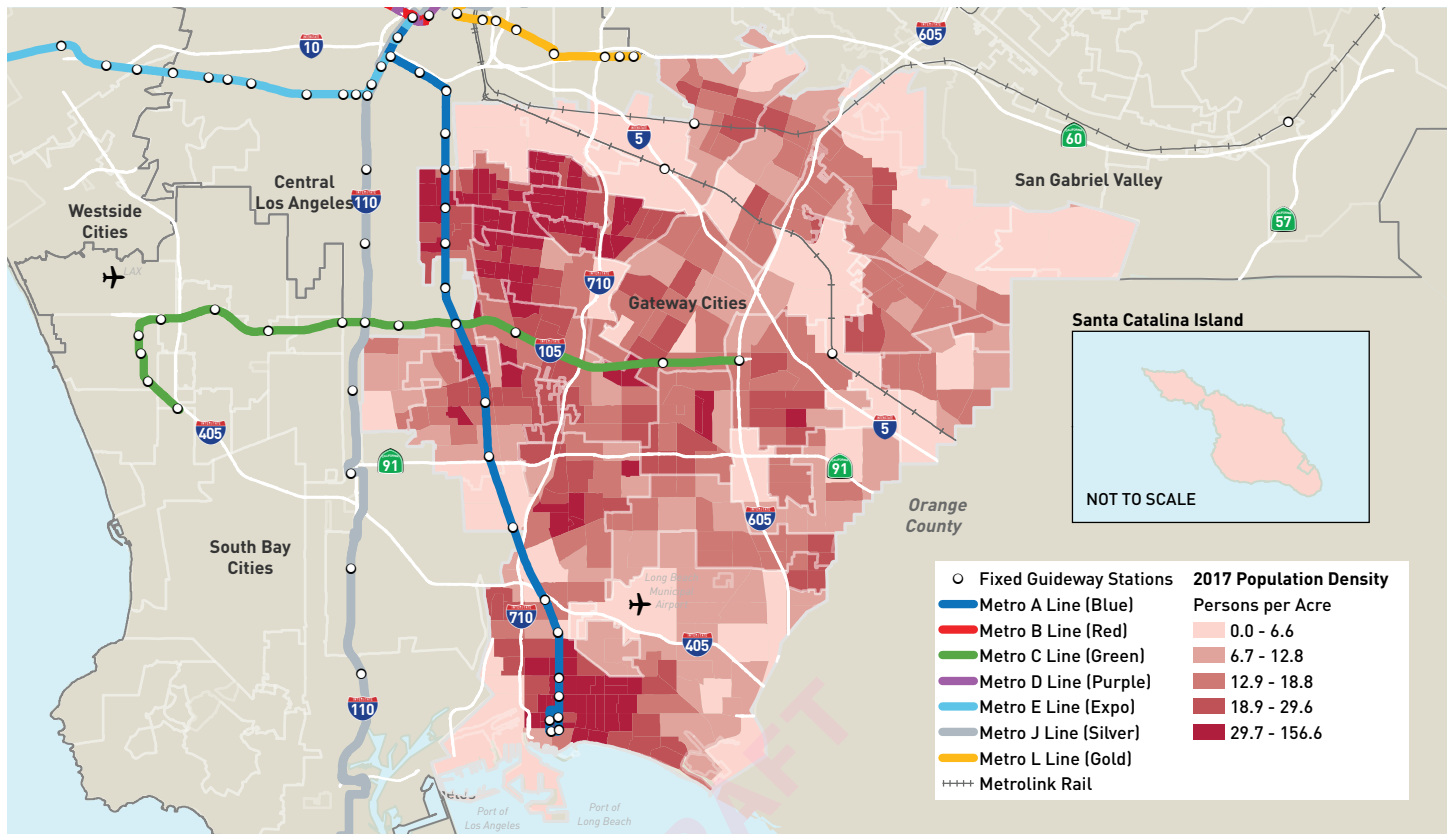


Figure 79

### GATEWAY CITIES LAND USE

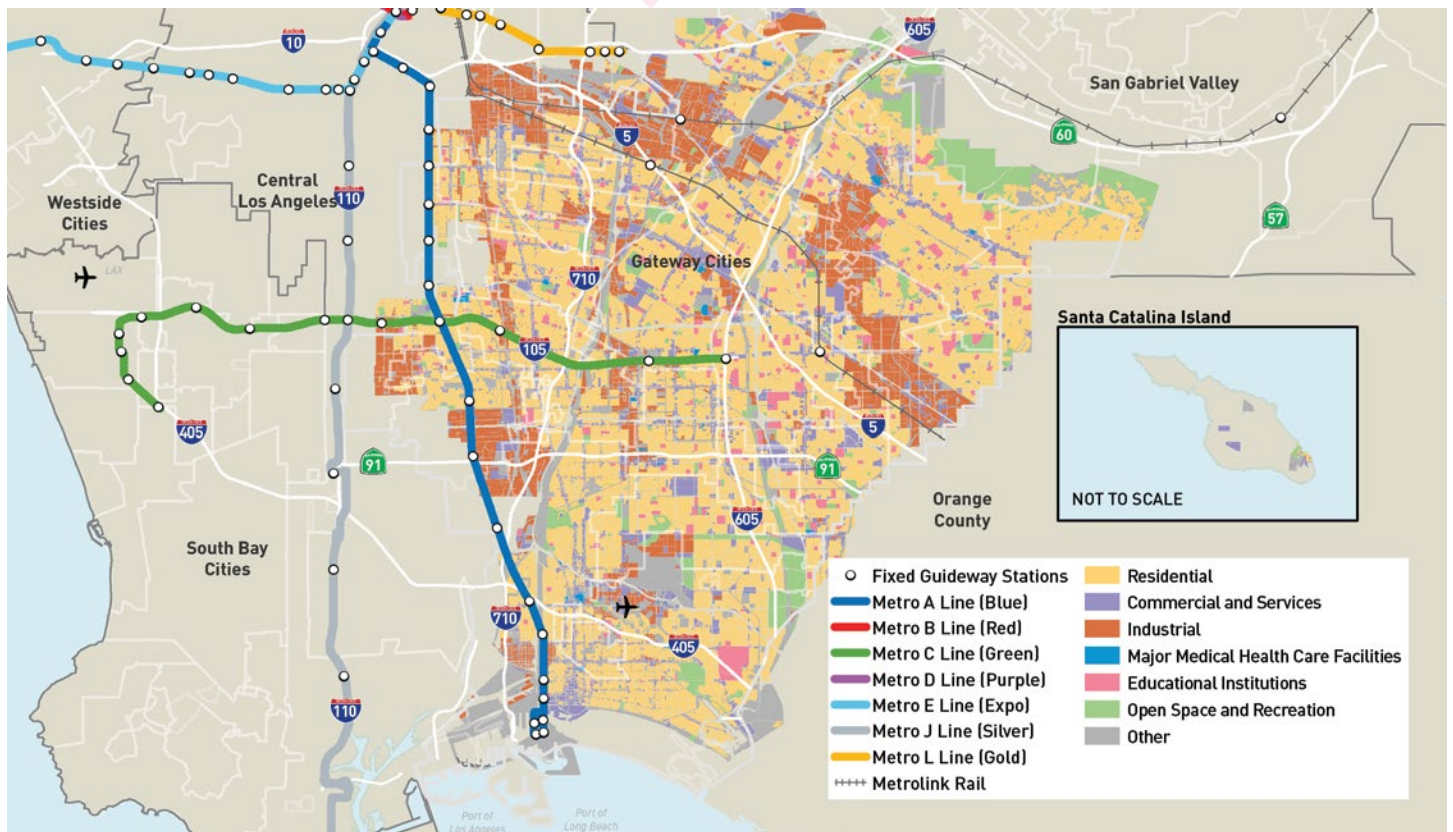


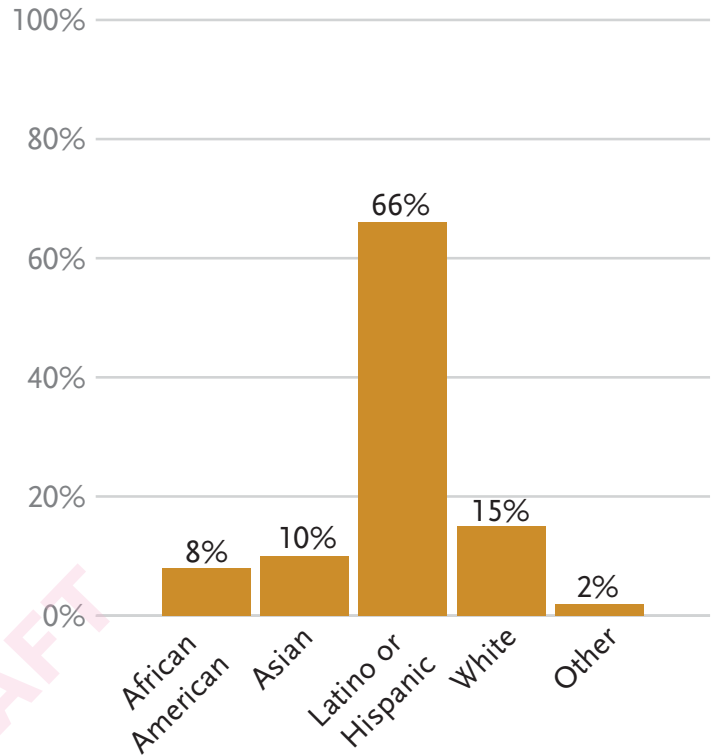
Figure 8o

**Gateway Cities Summary Demographics**

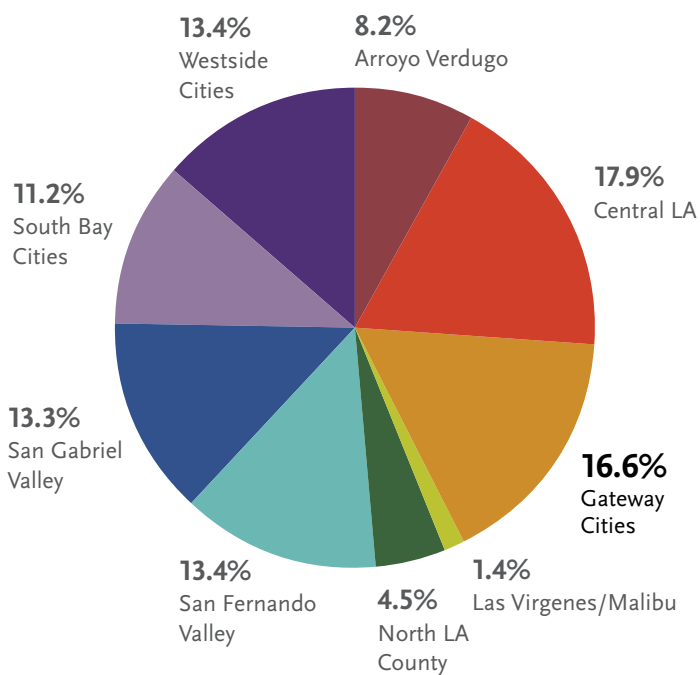
Total Area 235 Square Miles, Rank 4th  
(Out of 9 Subregions)



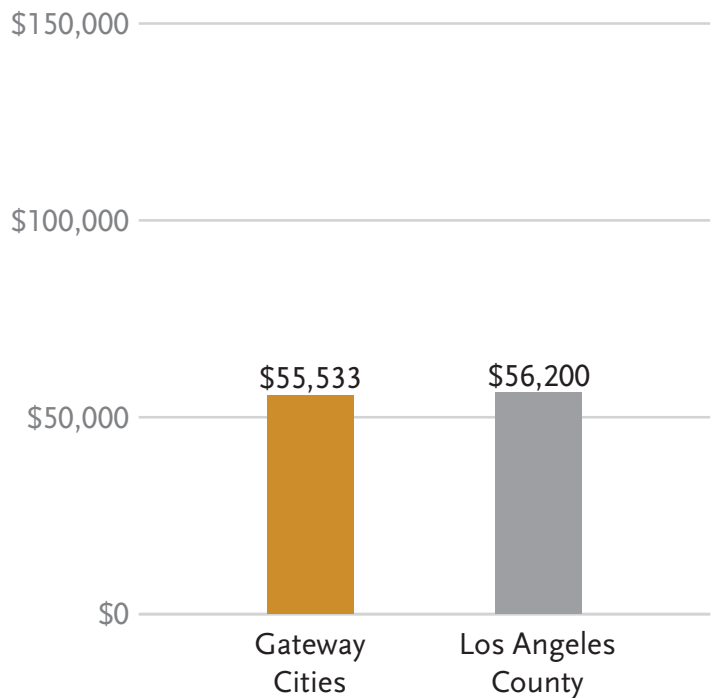
Total Population 1,979,441 People, Rank 1st



Total Employment 735,342 Jobs, Rank 2nd



Median Household Income \$55,533 Average MHI, Rank 8th





# Las Virgenes/ Malibu

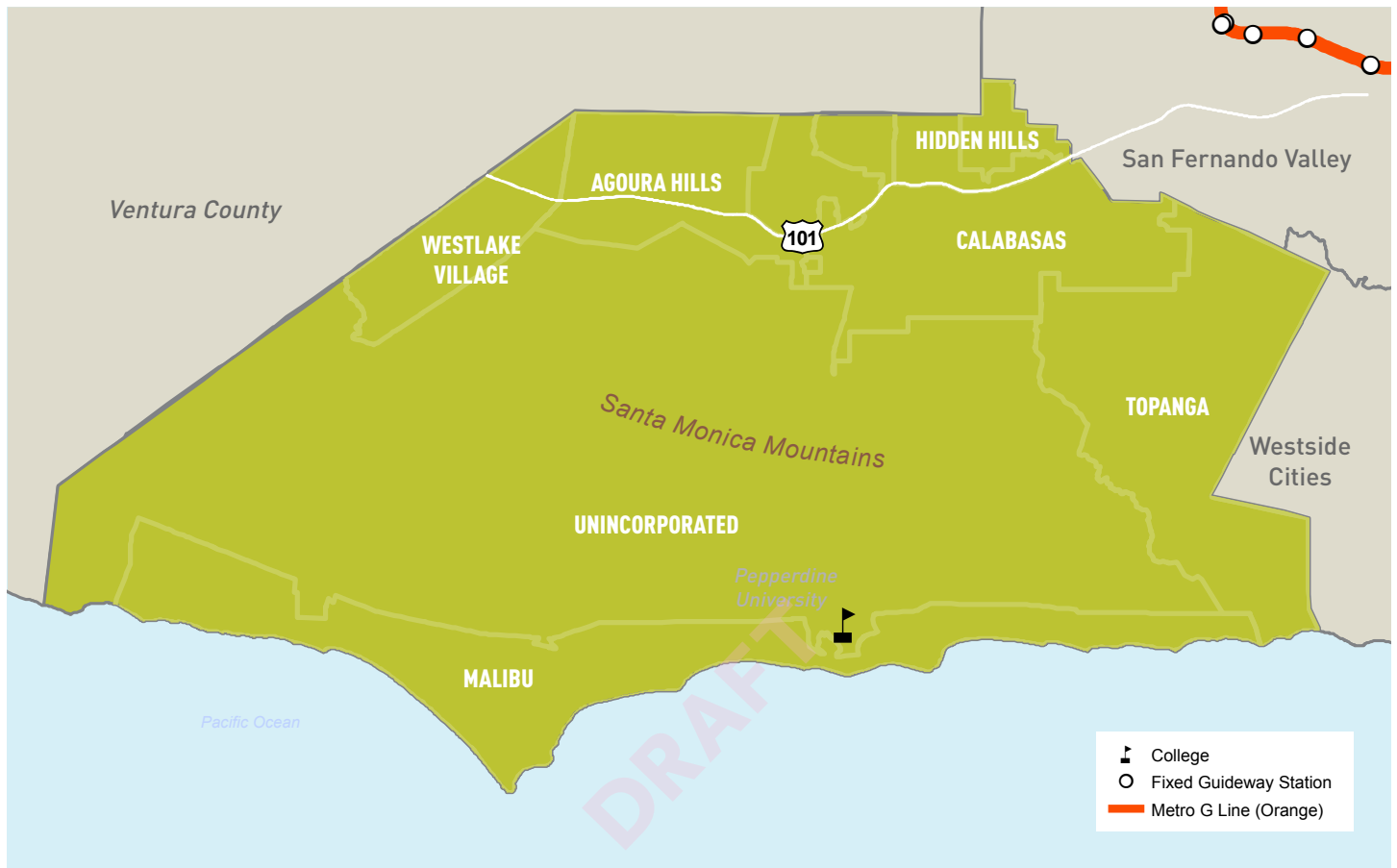
The Las Virgenes/Malibu subregion occupies the westernmost portion of LA County and includes Agoura Hills, Calabasas, Hidden Hills, Malibu and Westlake Village, and parts of unincorporated LA County.

## Major Transportation Facilities

The US-101 is the subregion's dominant transportation corridor, around which most commercial/research park development and employment opportunities have clustered. This generally low-density area has a limited network of arterial roadways, of which Pacific Coast Highway (SR-1) is the most heavily traveled. A series of north-south arterials connect the two highways, which include SR-23, Kanan Dume/Kanan, Las Virgenes/Malibu Canyon Rd, and Topanga Canyon Bl (SR-27). Regional bus service is provided by Metro and LADOT. Calabasas runs a community shuttle while the other cities in the subregion operate dial-a-ride services. There is currently no rail service in the subregion.

The transportation system in the Las Virgenes/Malibu subregion has substantial capacity problems. As home to some of the nation's most-visited beaches and recreational sites, severe weekend and summertime traffic are frequent occurrences. Weekday traffic volumes have also grown as development and employment opportunities have extended into Ventura County. The reliance on two primary routes presents substantial challenges to this area and yields traffic delays, disruptions and unreliable service levels. Due to the region's topography, size, modest roadway network, and limited transportation alternatives, congestion has become commonplace. Bus service does not traverse the mountains in a north-south direction. This significantly reduces access to employment opportunities by day workers and access to Pepperdine University by students traveling from other areas of the region.

Figure 81  
**LAS VIRGENES/MALIBU**



## Land Use and Demographics

The area’s most prominent feature is the strikingly rugged Santa Monica Mountains, which divide this subregion. The Las Virgenes cities occupy the north-facing foothills and valleys adjacent to the Santa Monica Mountains State Park and National Recreation Area, and the city of Malibu sits in the south stretching 21 miles along the Pacific coast. The coastline is home to world-class beaches and surf breaks, which include Topanga Beach, Surfrider Beach, and Zuma Beach. Overlooking the Pacific Ocean is Pepperdine University, one of the nation’s top business and law schools.

Roughly two percent of the subregion is designated for commercial/industrial land use and residential land use covers approximately 15 percent. The largest area in the subregion is unincorporated and used for recreation/state parks. The Santa Monica Mountain Range extends east-west for roughly 40 miles, paralleling the north shore of Santa Monica Bay. Figure 86 shows the variety of land use for communities within the subregion. The City of Hidden Hills has the highest percentage of residential land use at 85 percent, but is also the smallest city in the subregion. It is followed by Malibu with 37 percent residential land use, and the largest city in the subregion.

Population and employment density in the subregion is relatively low. The higher concentrations of employment density are in the immediate area surrounding the US-101 where there is commercial and industrial land use. This subregion covers 162 square miles and is home to five cities and unincorporated areas. The subregion has the lowest total population, lowest total employment, and lowest total daily trips. The area is predominately non-Hispanic Whites and has the highest average median household income of all the subregions.

## Major Projects and Programs

The subregion does not have any major planned projects. Highway efficiency is the region’s subregional program with the largest amount of funding.

Figure 82

### Las Virgenes/Malibu Projects and Multi-year Subregional Programs

CATEGORIES	DESCRIPTION
Major Projects (YOE \$)	N/A
Multi-year Subregional Programs (in 2015 \$)	Active Transportation, Transit and Technology Program \$32 M (Start Date FY 2018) Highway Efficiency Program \$133 M (Start Date FY 2018) Modal Connectivity Program \$68 M (Start Date FY 2048) Traffic Congestion Relief and Improvement Program \$63 M (Start Date FY 2048)

Source: [https://theplan.metro.net/wp-content/uploads/2016/09/FactSheet\\_Malibu.pdf](https://theplan.metro.net/wp-content/uploads/2016/09/FactSheet_Malibu.pdf)

Figure 83  
**LAS VIRGENES/MALIBU DAILY TRIPS**

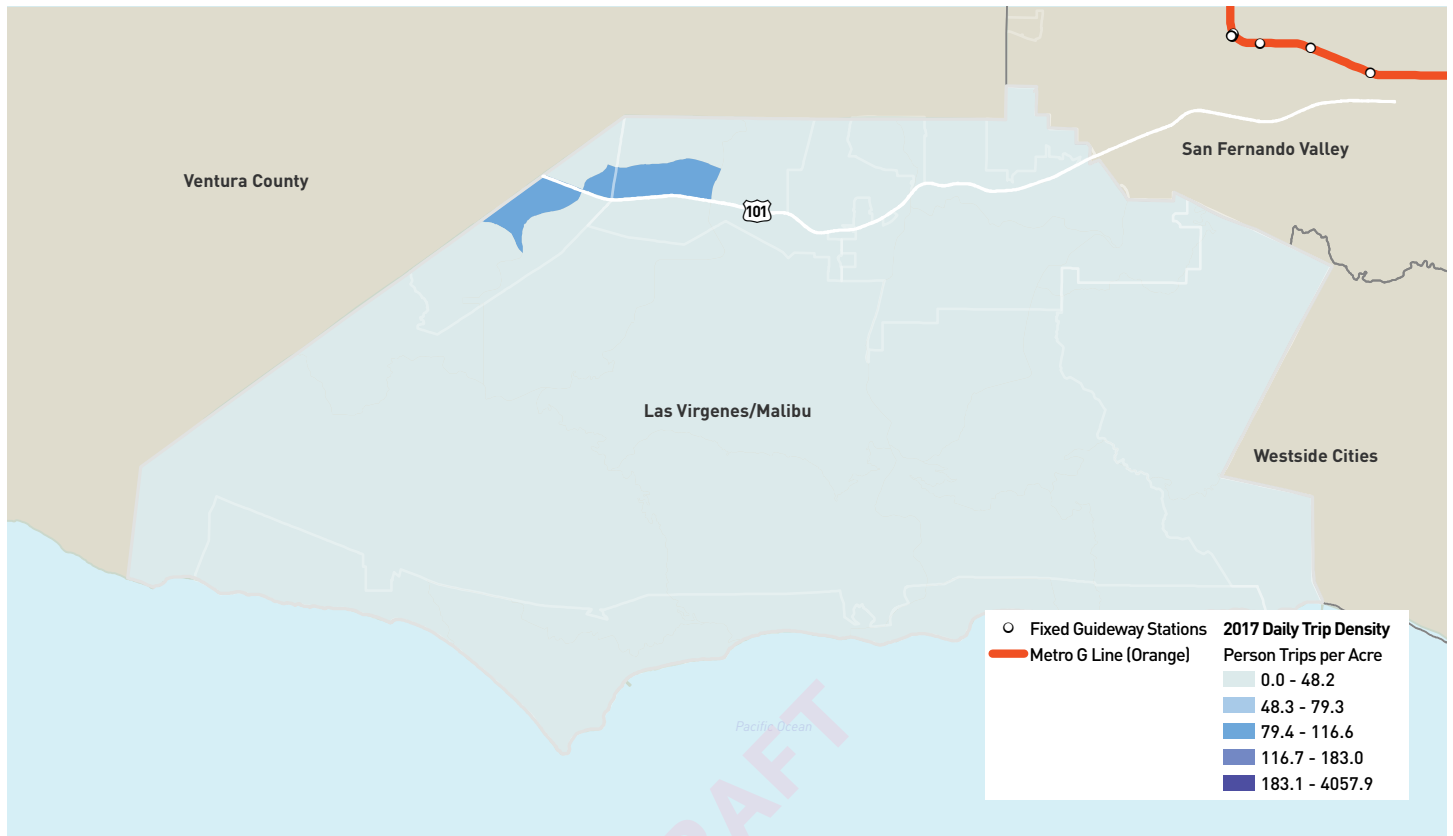


Figure 84  
**LAS VIRGENES/MALIBU EMPLOYMENT DENSITY**

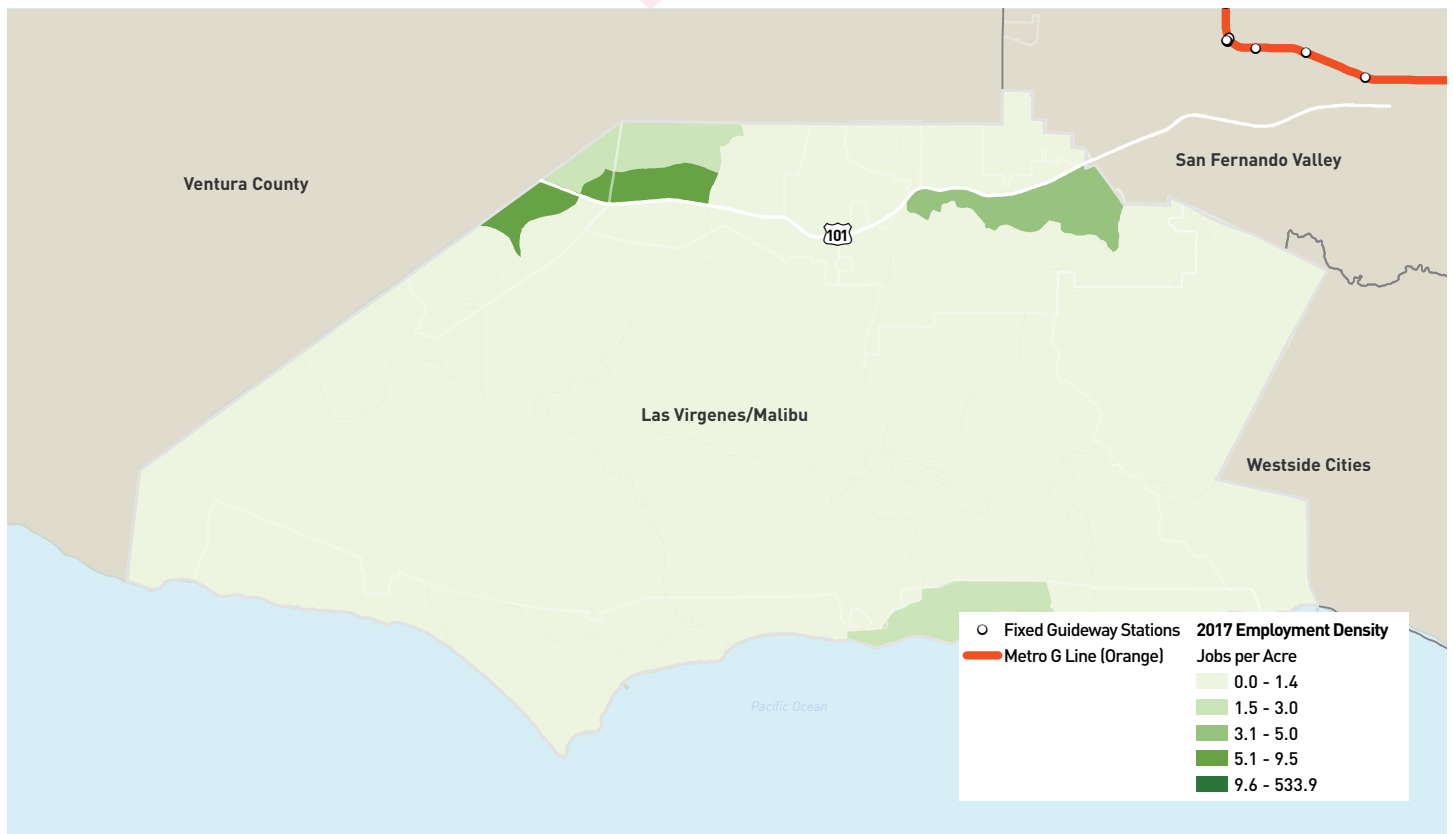


Figure 85

### LAS VIRGENES/MALIBU POPULATION DENSITY

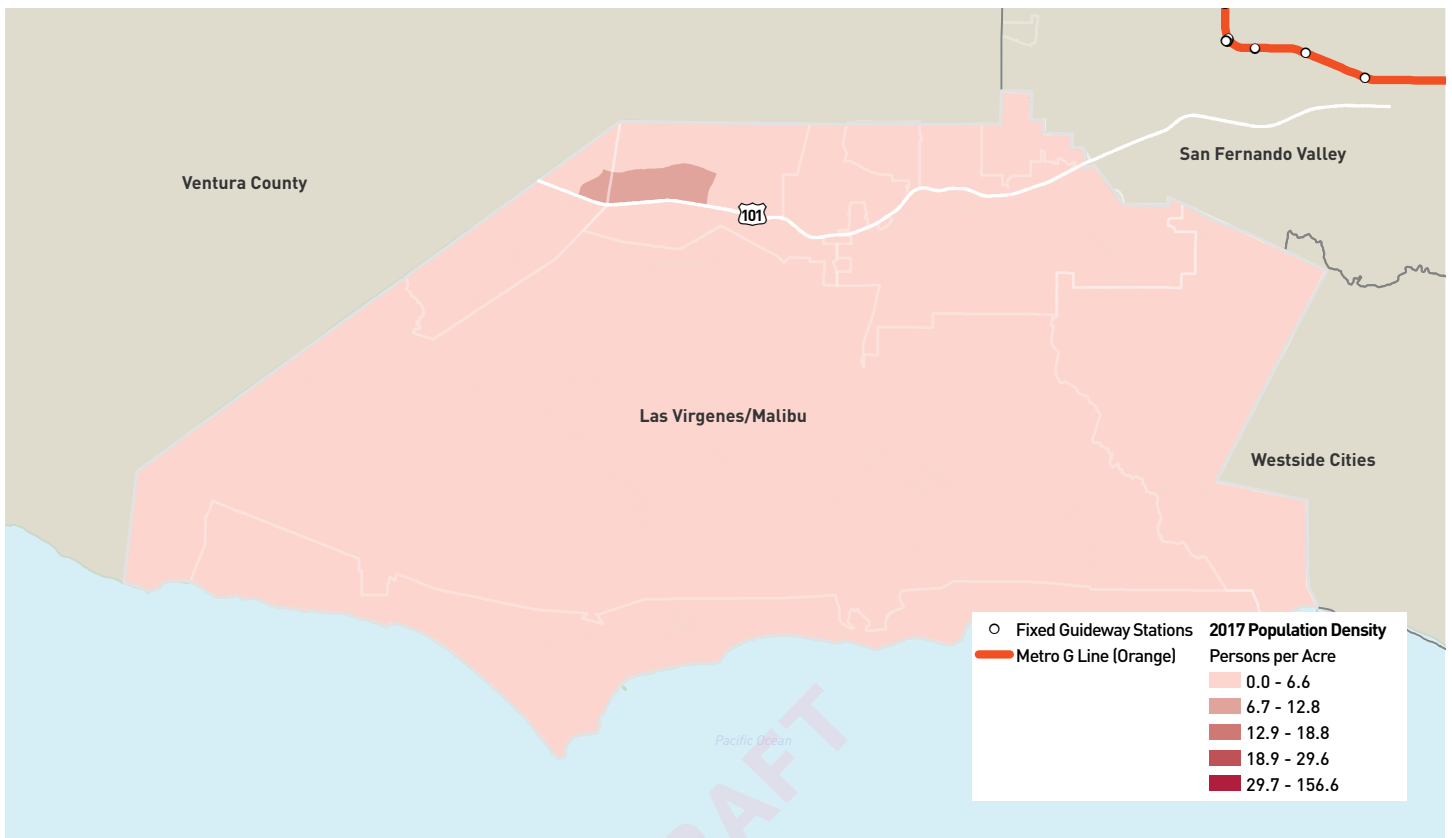


Figure 86

### LAS VIRGENES/MALIBU LAND USE

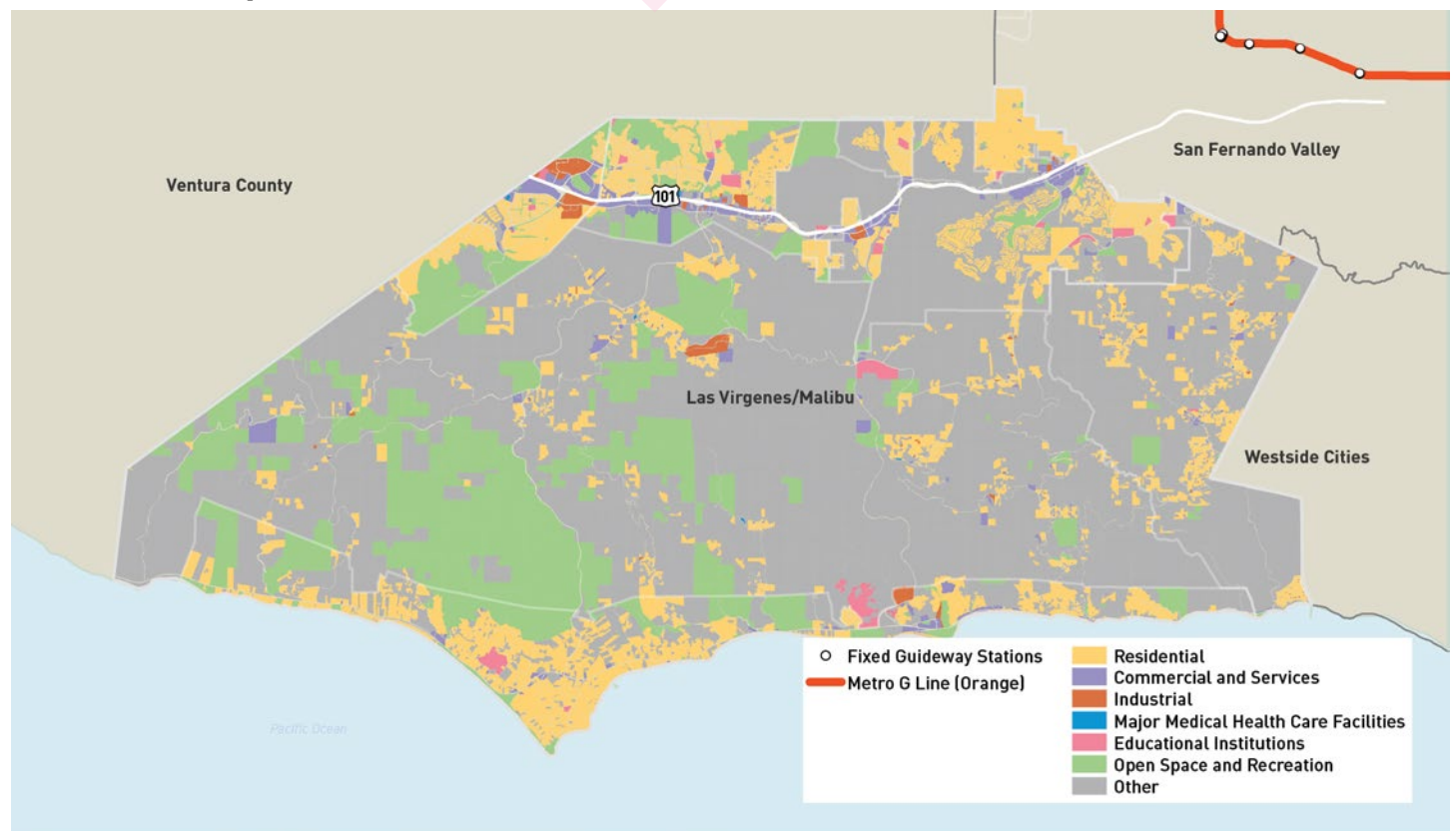
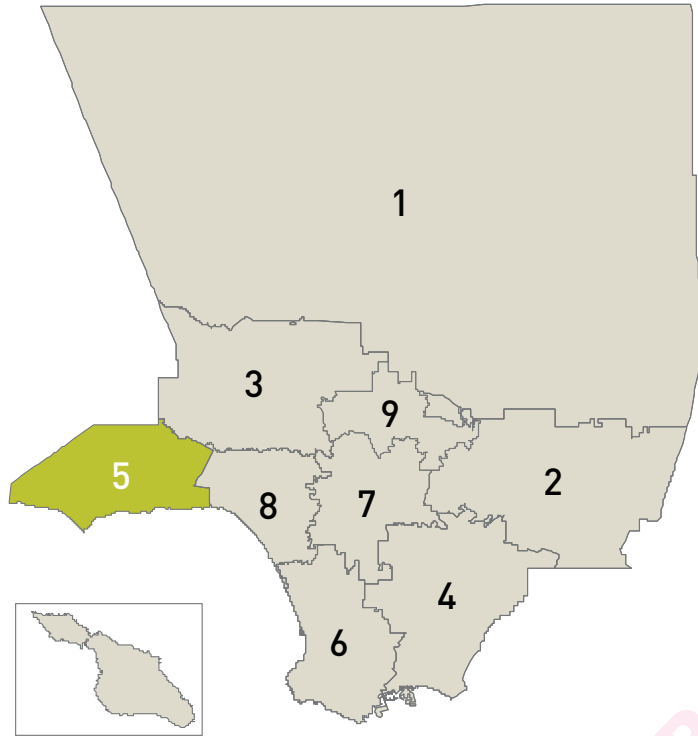


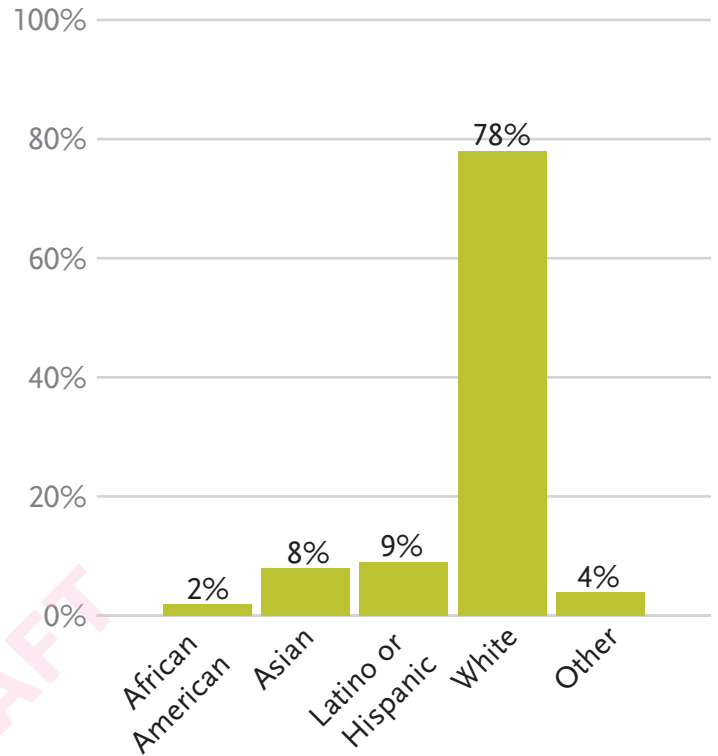
Figure 87

**Las Virgenes/Malibu Summary Demographics**

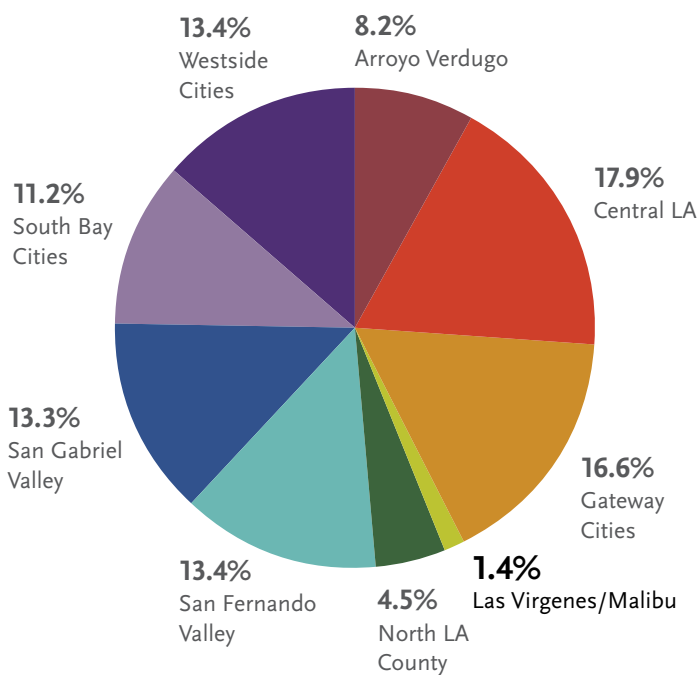
Total Area 162 Square Miles, Rank 5th  
(Out of 9 Subregions)



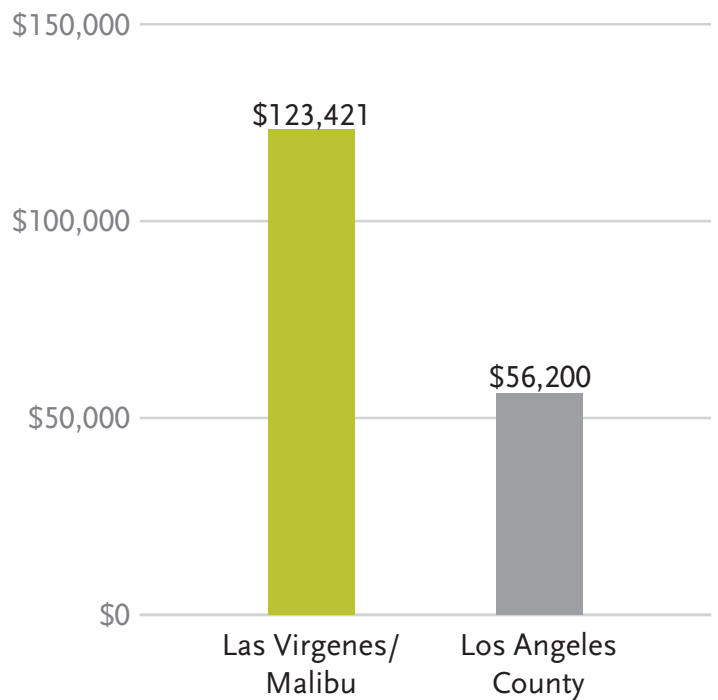
Total Population 84,282 People, Rank 9th



Total Employment 61,743 Jobs, Rank 9th



Median Household Income \$123,421 Average MHI, Rank 1st





# North Los Angeles County

North Los Angeles County includes Lancaster, Palmdale, and Santa Clarita. North Los Angeles County subregion also encompasses the following unincorporated communities: Acton, Agua Dulce, Castaic, Desert View Highlands, Elizabeth Lake, Green Valley, Hasley Canyon, Lake Hughes, Lake Los Angeles, Leona Valley, Littlerock, Quartz Hill, Stevenson Ranch, Sun Village, and Val Verde.

## Major Transportation Facilities

Area freeways include the Golden State Freeway (I-5) and the Antelope Valley Freeway (SR-14). State Route SR-126 and SR-138 also impact the region. Metrolink operates commuter rail services with stations located in the cities of Lancaster, Palmdale, Santa Clarita, and in unincorporated areas of LA County.

## Land Use and Demographics

Roughly one percent of the subregion is designated for commercial/industrial land use and residential land use covers approximately four percent. Desert View Highlands is the smallest community in the subregion but has the highest population, employment, and daily trip densities. Palmdale is the largest city, followed by Lancaster, and Santa Clarita. The City of Santa Clarita has the 2nd highest densities in the subregion.

The North Los Angeles County subregion comprises the LA County area north of the San Fernando Valley. This subregion covers 2,479 square miles and includes three cities and unincorporated LA County. There are various unique characters in the landscape; as shown in Figure 93, the majority of the area is designated as desert/forest. The subregion is bounded to the south by the San Gabriel mountain range and Angeles National Forest, north-east by the Mojave Desert, and west by the Santa Susana mountain range. Snow is common in the mountain ranges over 4,000 feet. The subregion is home to the Henry Mayo Newhall Hospital as well as the California Institute of the Arts.

The subregion is the largest in the County by area, ranks 6th in total population, 8th in total employment, 8th in total daily trips, and 3rd in average median household income. The subregion has a high percentage of non-Hispanic Whites and Latino or Hispanic population.

Figure 88  
**NORTH LOS ANGELES COUNTY**



## Major Projects and Programs

North Los Angeles County will see two large projects including I-5 capacity enhancements and the High Desert Multi Purpose Corridor extending east-west across the region. The major subregional programs by dollar amount include the arterial and transit programs.

Figure 89

### North Los Angeles County Projects and Multi-year Subregional Programs

CATEGORIES	DESCRIPTION
Major Projects (YOE \$)	I-5 North Capacity Enhancements (SR-14 to Lake Hughes Rd) \$679 M (2026)
	High Desert Multi-Purpose Corridor (HDMC) \$ 393 M (2034)
Multi-year Subregional Programs (in 2015 \$)	Active Transportation Program \$264 M (Start Date FY 2018)
	Transit Program \$88 million (\$588 M total cost) (Start Date FY 2018)
	Multimodal Connectivity Program \$239 M (Start Date FY 2033)
	Arterial Program \$726.1 M (Start Date FY 2048)
	Goods Movement Program \$104 M (Start Date FY 2048)
	Highway Efficiency Program \$128.9 M (Start Date FY 2048)

Source: [https://theplan.metro.net/wp-content/uploads/2016/09/FactSheet\\_North\\_County.pdf](https://theplan.metro.net/wp-content/uploads/2016/09/FactSheet_North_County.pdf)

Figure 90  
**NORTH LOS ANGELES COUNTY DAILY TRIPS**

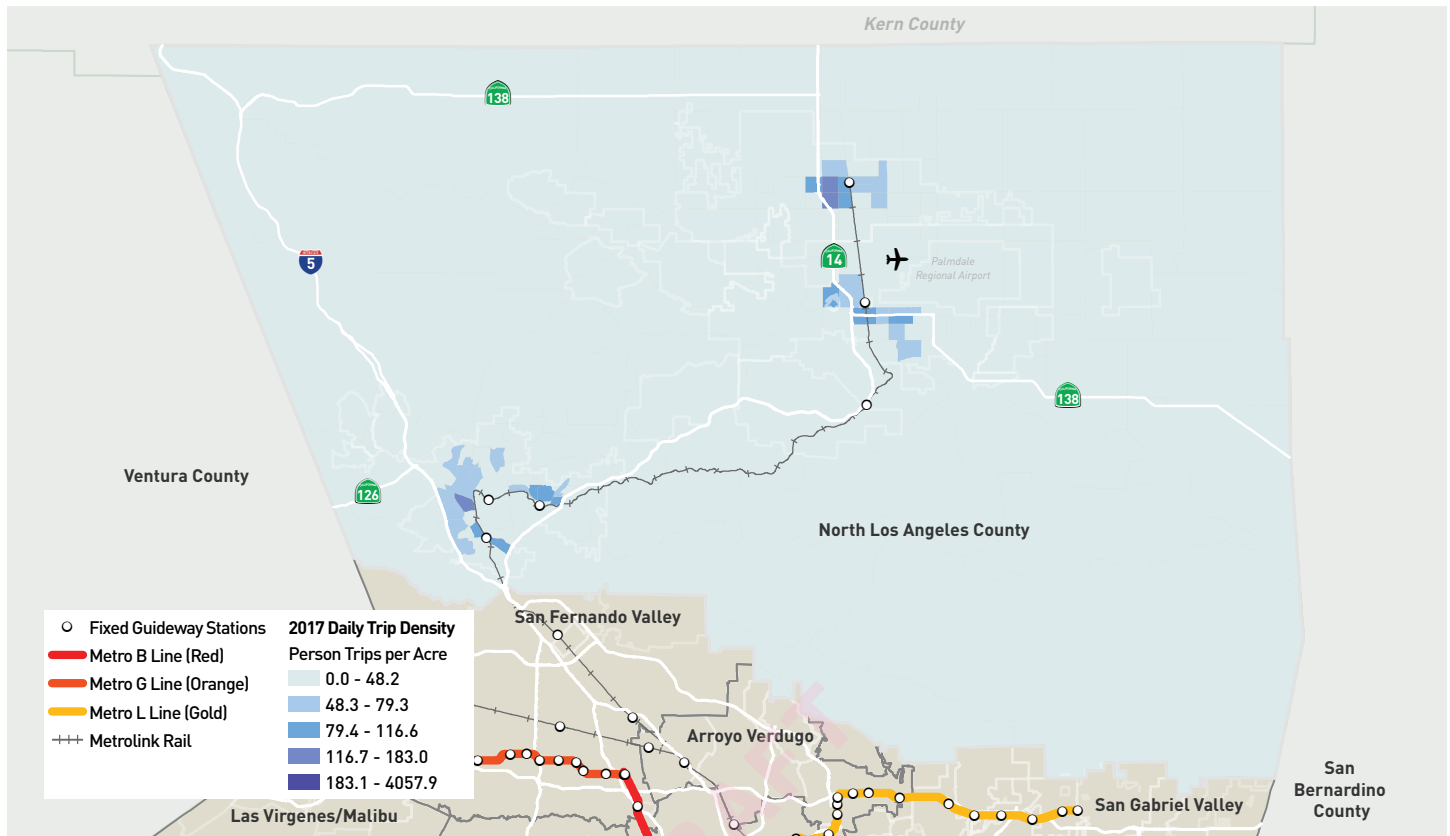


Figure 91  
**NORTH LOS ANGELES COUNTY EMPLOYMENT DENSITY**

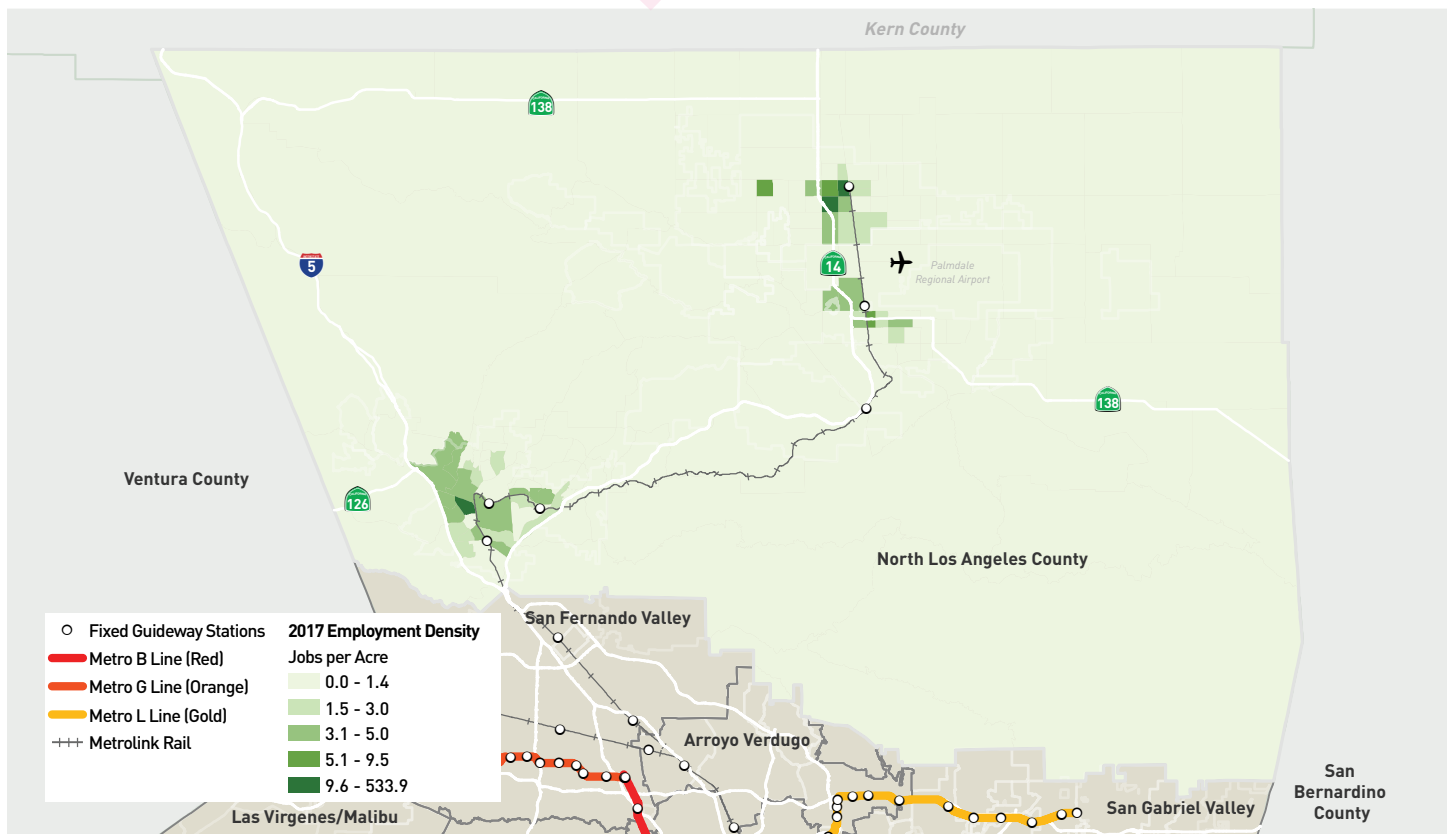


Figure 92

## NORTH LOS ANGELES COUNTY POPULATION DENSITY

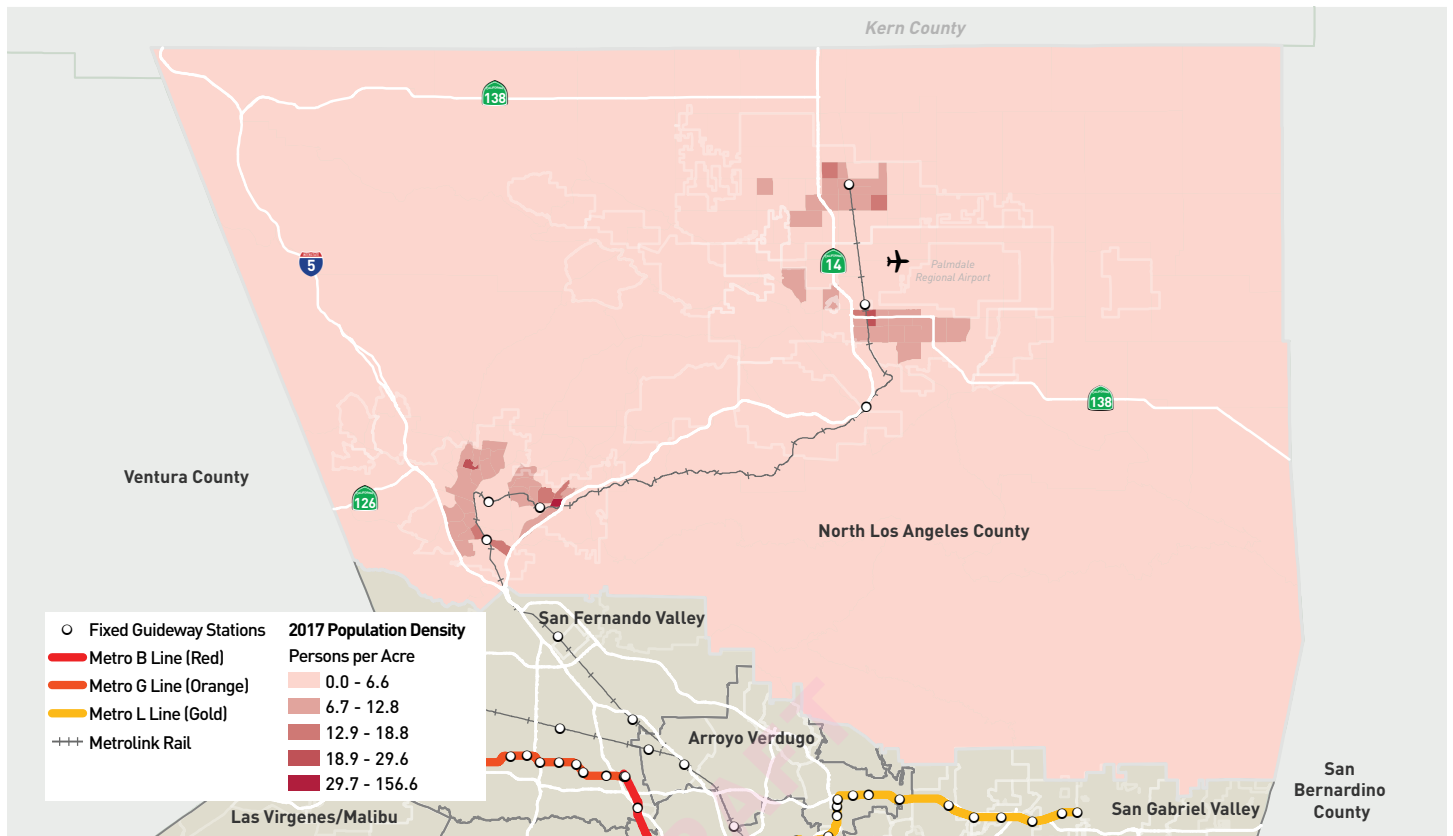


Figure 93

## NORTH LOS ANGELES COUNTY LAND USE

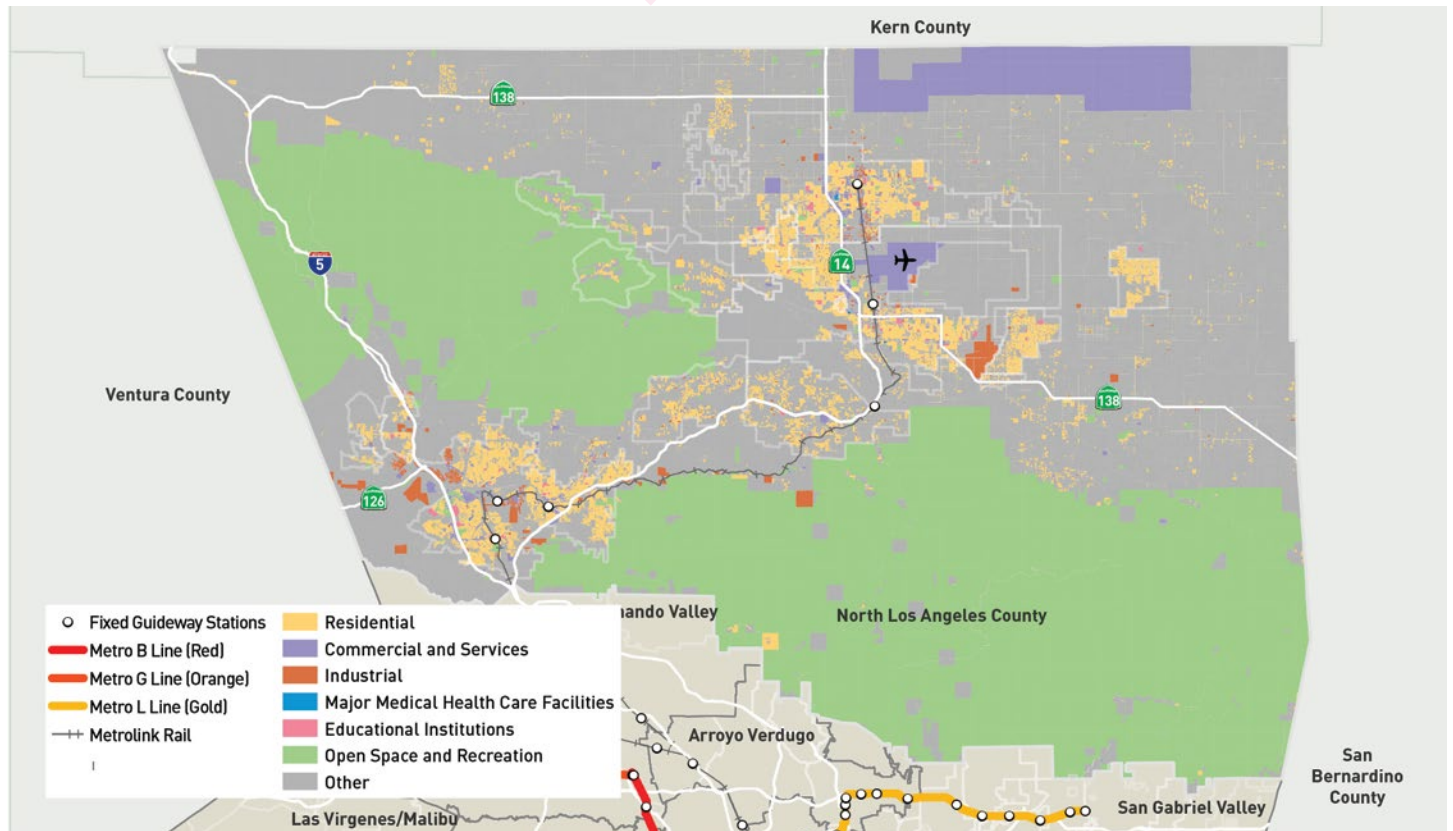
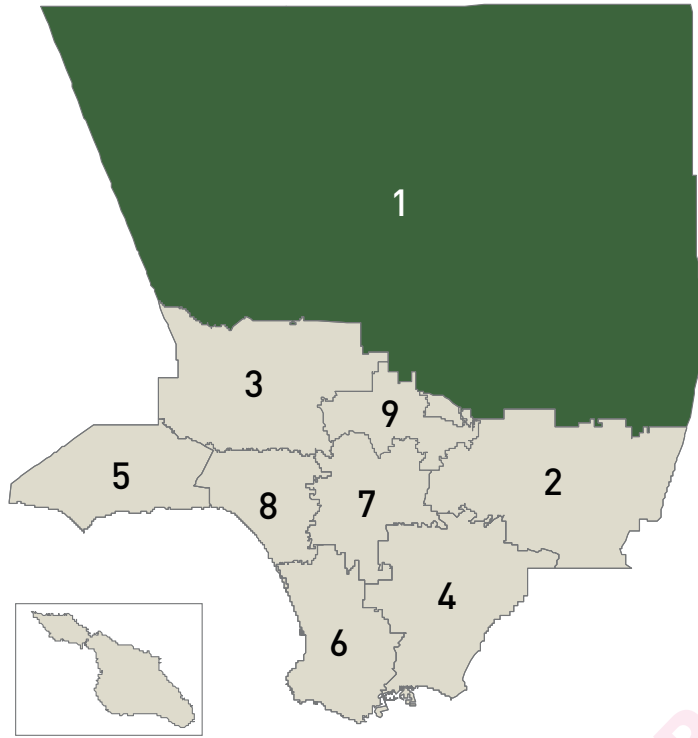


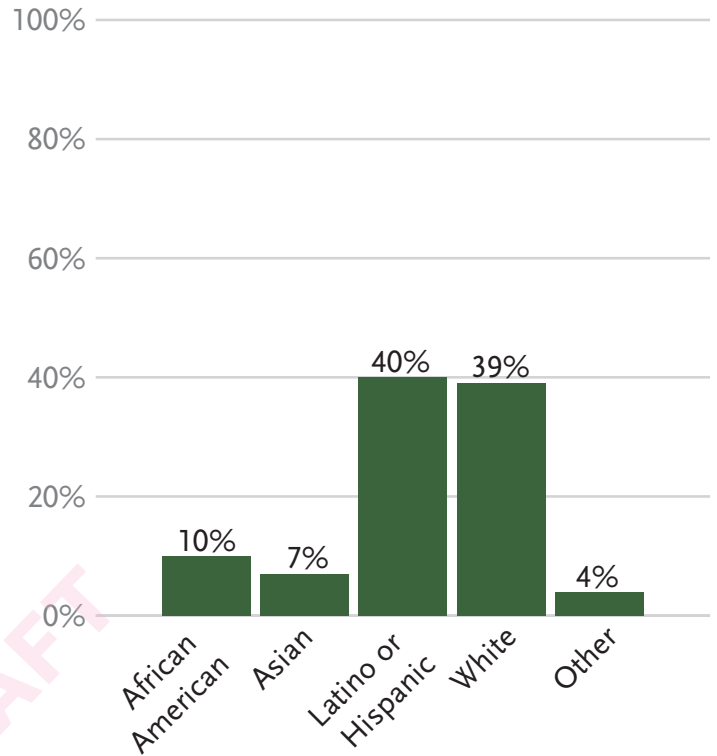
Figure 94

### North Los Angeles County Summary Demographics

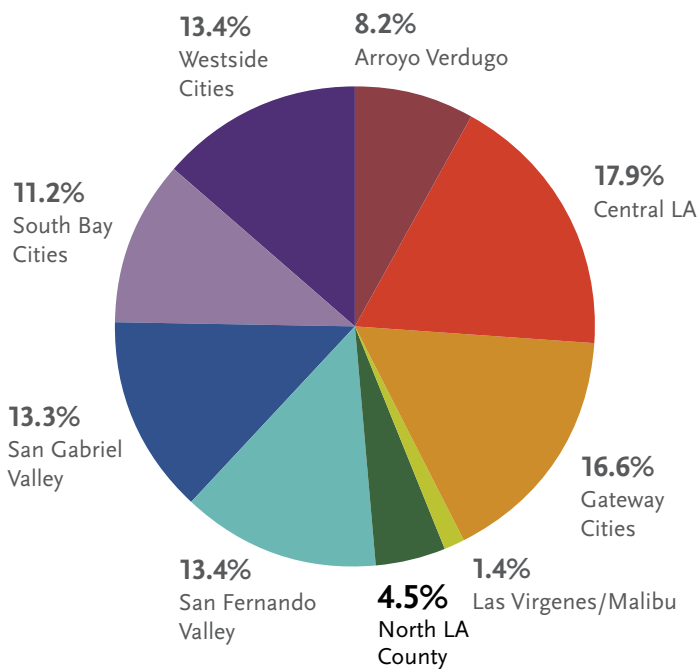
Total Area 2,479 Square Miles, Rank 1st  
(Out of 9 Subregions)



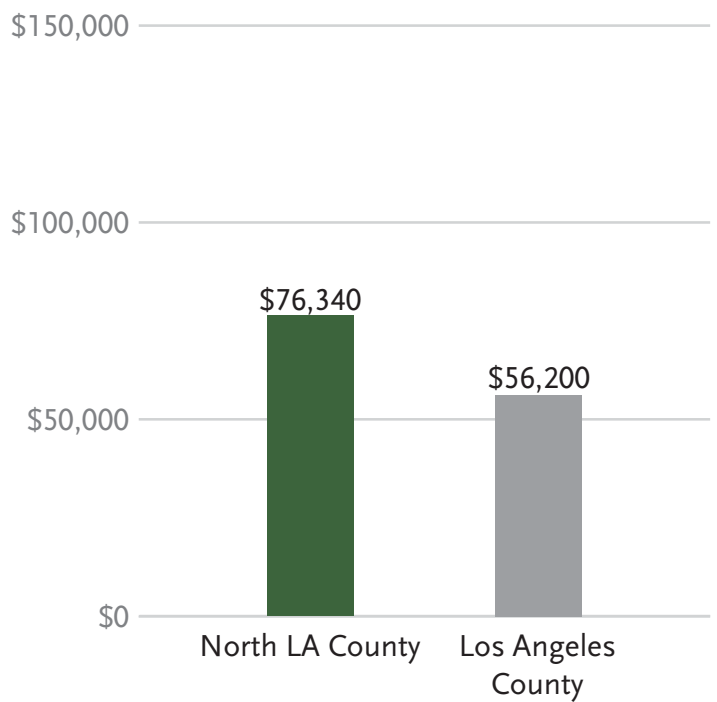
Total Population 671,680 People, Rank 6th



Total Employment 199,382 Jobs, Rank 8th



Median Household Income \$76,340 Average MHI, Rank 3rd





# San Fernando Valley

San Fernando Valley includes portions of the City of Los Angeles, City of San Fernando, and parts of unincorporated LA County. The San Fernando (SF) Valley subregion fans north of the Hollywood Hills west to the Las Virgenes/Malibu area and eastward towards the Arroyo Verdugo subregion. This subregion covers 269 square miles and is home to two cities and numerous Los Angeles City communities. The San Fernando Valley is home to several entertainment companies, the most well-known of which work in motion pictures, music recording, and television production.

## Major Transportation Facilities

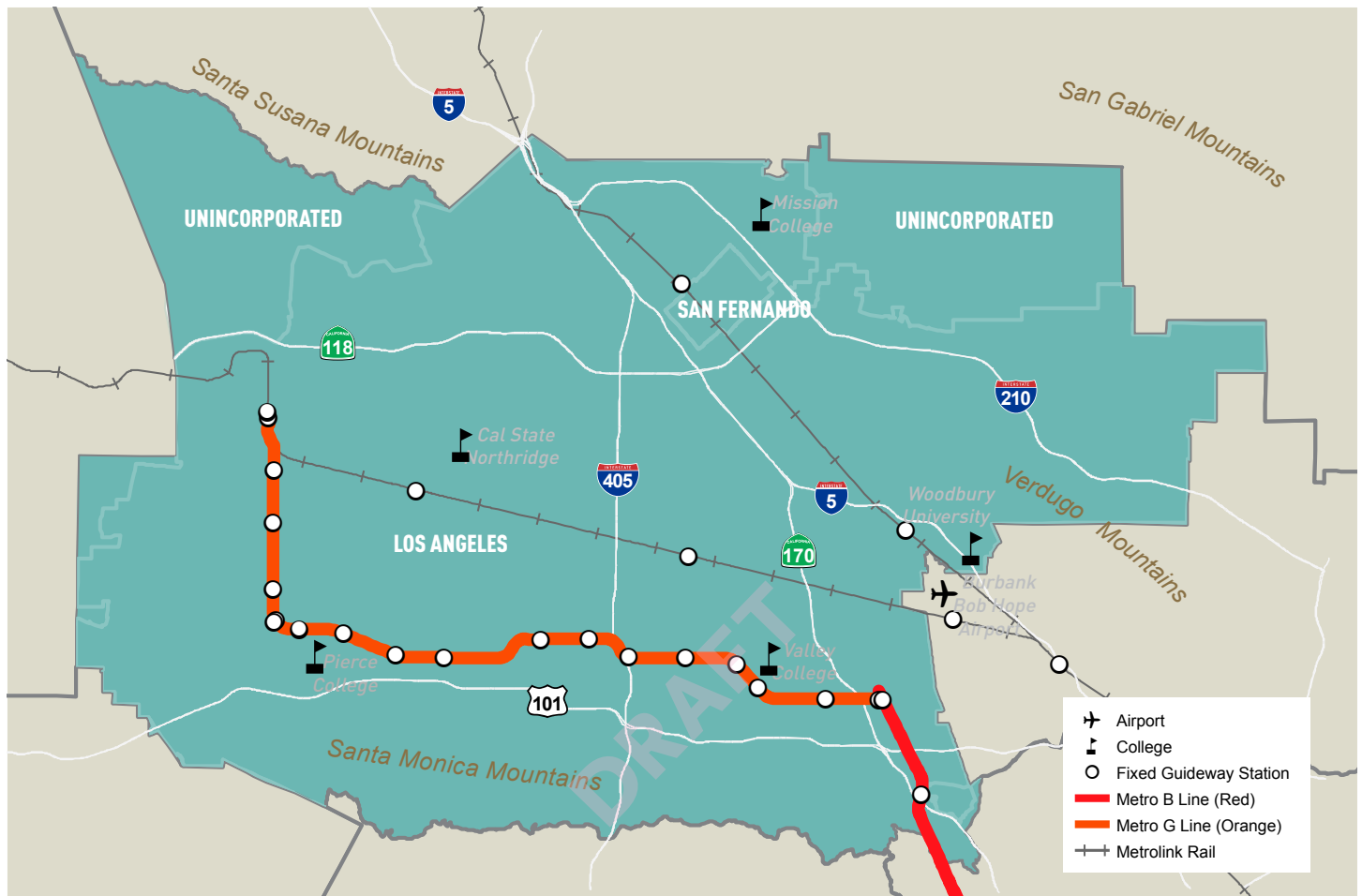
A number of freeways crisscross this subregion, including the Golden State Freeway (I-5), Ventura Freeway (US-101 and SR-134), Simi Valley Freeway (SR-118), Hollywood Freeway (SR-170), San Diego Freeway (I-405) and Foothill Freeway (I-210). There are carpool lanes on the SR-118, SR-134, and SR-170 and portions of the I-5 and I-405.

The I-405 is the major conduit between the San Fernando Valley and the Westside Cities, carrying several hundred thousand vehicles per day through the Sepulveda Pass. The I-405/US-101 and I-405/I-10 interchanges at either end of this section are two of the 10 busiest interchanges in the nation. Due to capacity limitations on the I-405 through the Pass, Sepulveda Bl, Laurel Canyon Bl, Coldwater Canyon Dr, and Beverly Glen Bl carry significant traffic between the San Fernando Valley and the Westside, impacting local residents. The I-405 is also the primary route to LAX from the San Fernando Valley and the North County sub-region.

Municipal operators as well as Metro provide bus and rail services to the subregion. The Metro Red Line serves this area via stations at Universal City and North Hollywood. Metrolink's Antelope Valley and Ventura County lines provide commuter rail service. The Metro Orange Line transitway, which includes a Class I bikeway along most of the alignment, runs between the North Hollywood Metro Rail station and the Metrolink Chatsworth Station in the area.

Figure 95

**SAN FERNANDO VALLEY**



## Land Use and Demographics

Roughly 11 percent of the subregion is designated for commercial/industrial land use and residential land use covers approximately 35 percent. Figure 100 below shows the land use for communities within the subregion. City of Los Angeles is the largest city and has the biggest residential area in the subregion. The City of San Fernando is the smallest city in the subregion but has the highest area percentage of residential, commercial, and industrial land uses as well as the highest density in terms of population, employment, and daily trips. The subregion is home to Cal State Northridge as well as the Providence Holy Cross Medical Center and Kaiser Permanente Panorama City.

The area is the 4th largest subregion by area, ranks 4th in total population, 3rd in total employment, 4th in total daily trips, and 5th in average median household income. The subregion has a high percentage of non-Hispanic Whites and Latino or Hispanic population.

## Major Projects and Programs

The San Fernando Valley subregion has several planned projects that will traverse the region. In the coming years, the G Line (Orange) will undergo improvements and the North Hollywood to Pasadena Transit Corridor will be built to connect to the G Line. The LA River Path will also connect the San Fernando Valley with active transportation facilities.

Figure 96

### San Fernando Valley Projects and Multi-year Subregional Programs

CATEGORIES	DESCRIPTION
Major Projects (YOE \$)	G Line (Orange) Improvement \$314 M (2025)
	North Hollywood to Pasadena Transit Corridor \$315 M (2026)
	East San Fernando Valley Light Rail Project \$1.57 B (2027)
	LA River Path – San Fernando Valley \$60 M (2025)
	Sepulveda Transit Corridor, Phase 1 – Valley to Westside \$7.69 M (2033) and Phase 2 – Westside to LAX 10.59 B (2057) (\$18.27 B total cost)
	North San Fernando Valley Transit Corridor \$207 M (2025)
	G Line (Orange) Conversion to Light Rail \$4.07 B (2057)
	City of San Fernando Bike Master Plan \$5 million (2052)
Multi-year Subregional Programs (in 2015 \$)	N/A

Source: [https://theplan.metro.net/wp-content/uploads/2016/09/FactSheet\\_SFV.pdf](https://theplan.metro.net/wp-content/uploads/2016/09/FactSheet_SFV.pdf)

Figure 97  
**SAN FERNANDO VALLEY DAILY TRIPS**

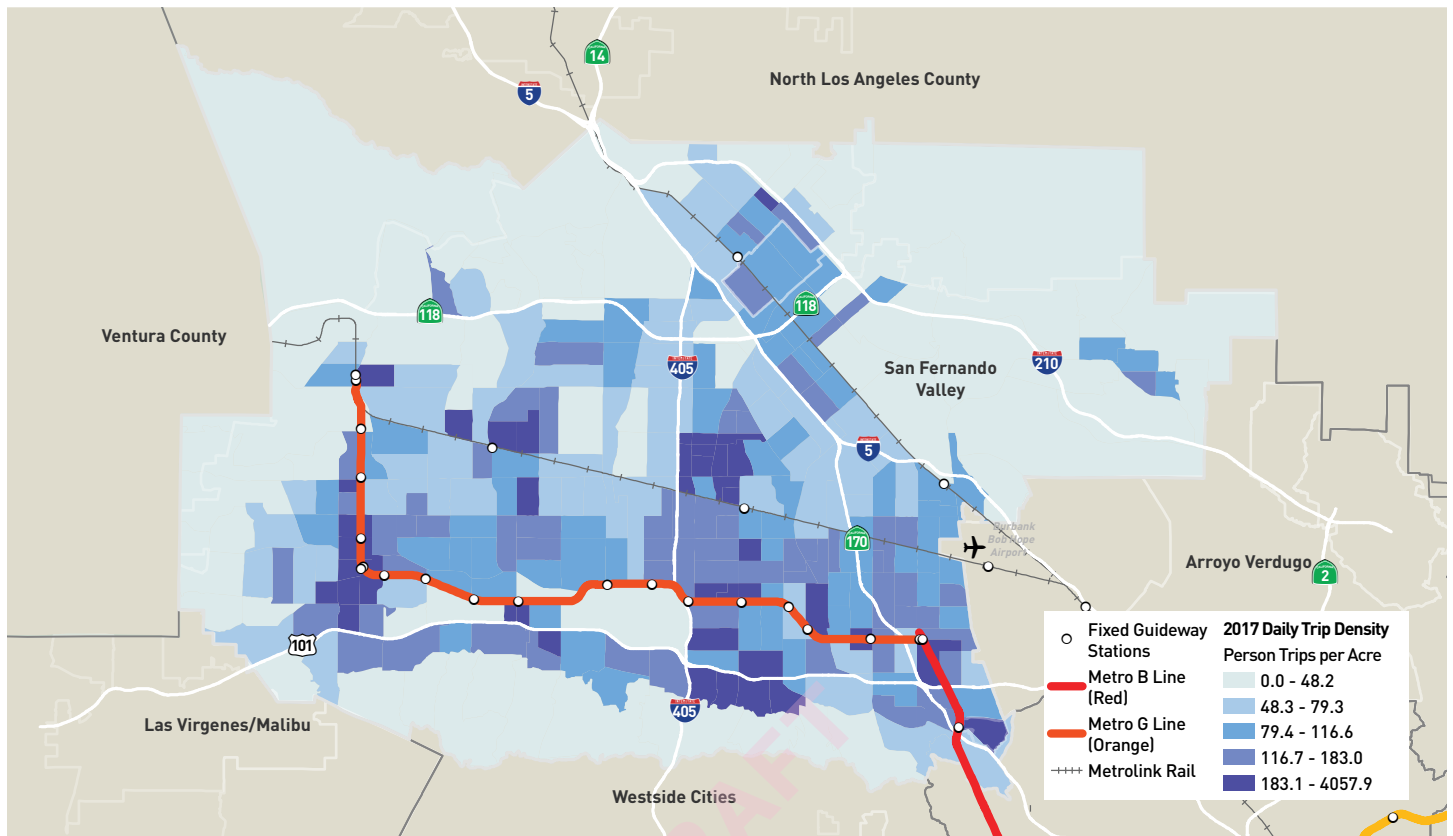


Figure 98  
**SAN FERNANDO VALLEY EMPLOYMENT DENSITY**

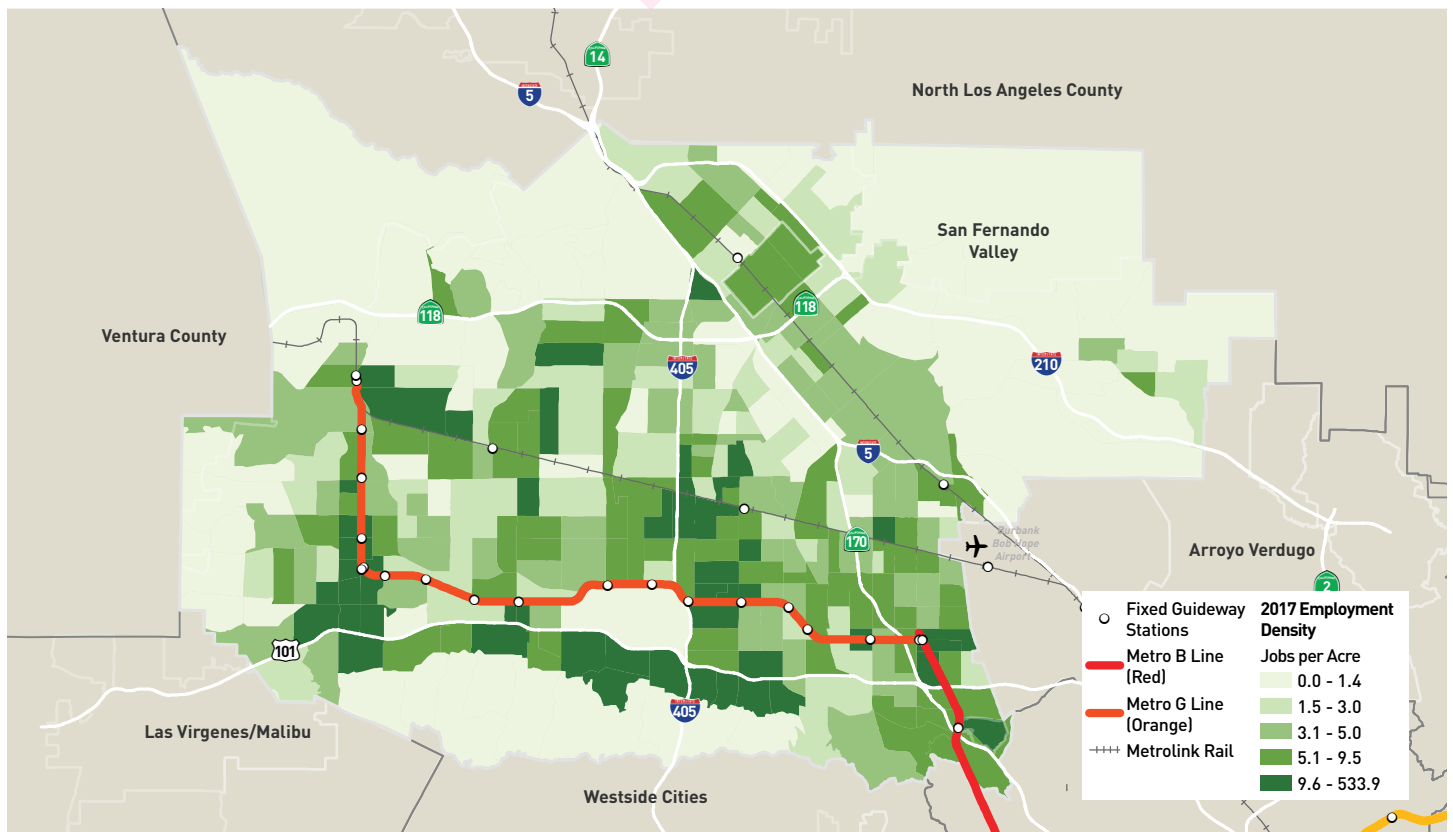


Figure 99

### SAN FERNANDO VALLEY POPULATION DENSITY

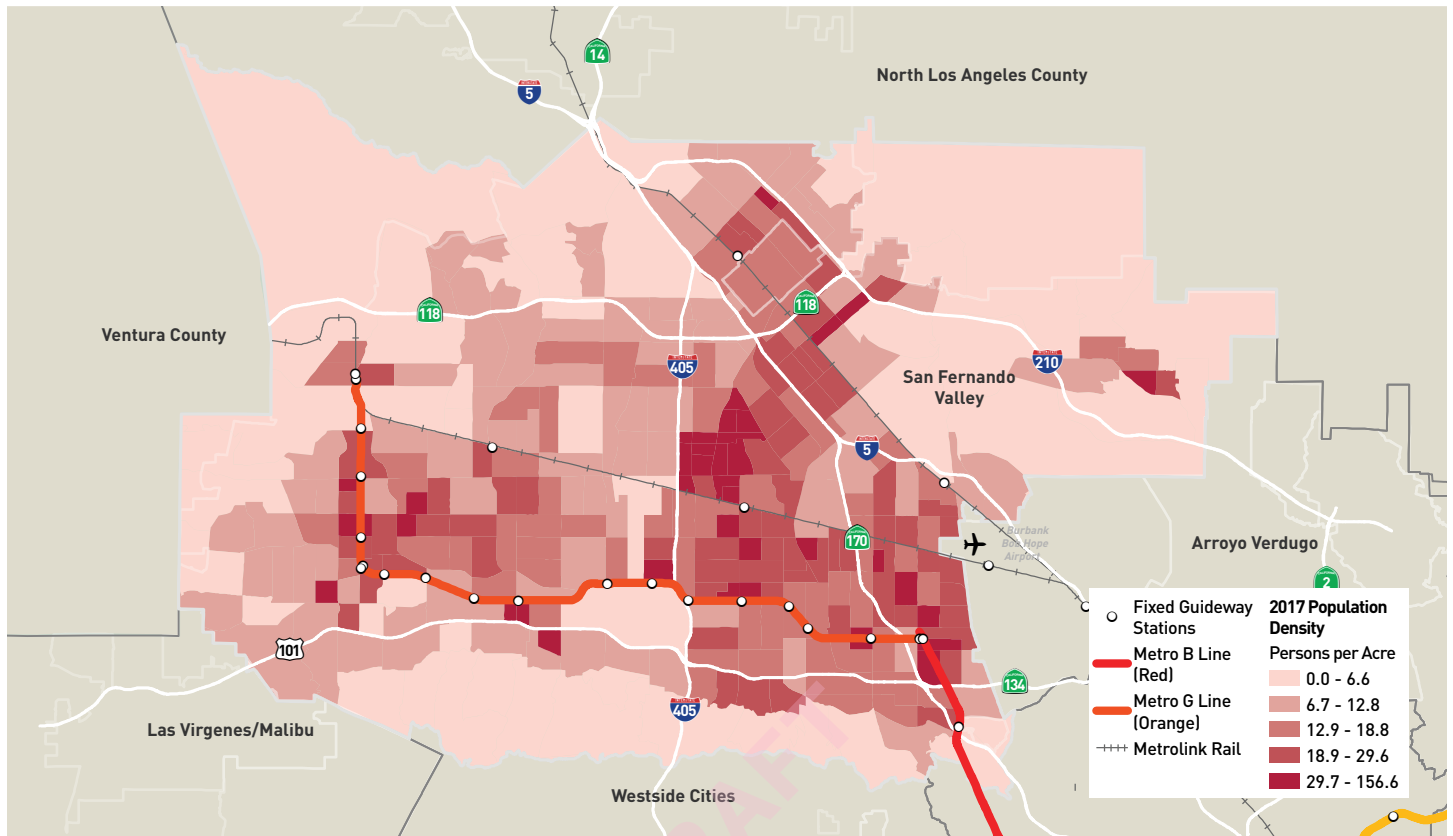


Figure 100

### SAN FERNANDO VALLEY LAND USE

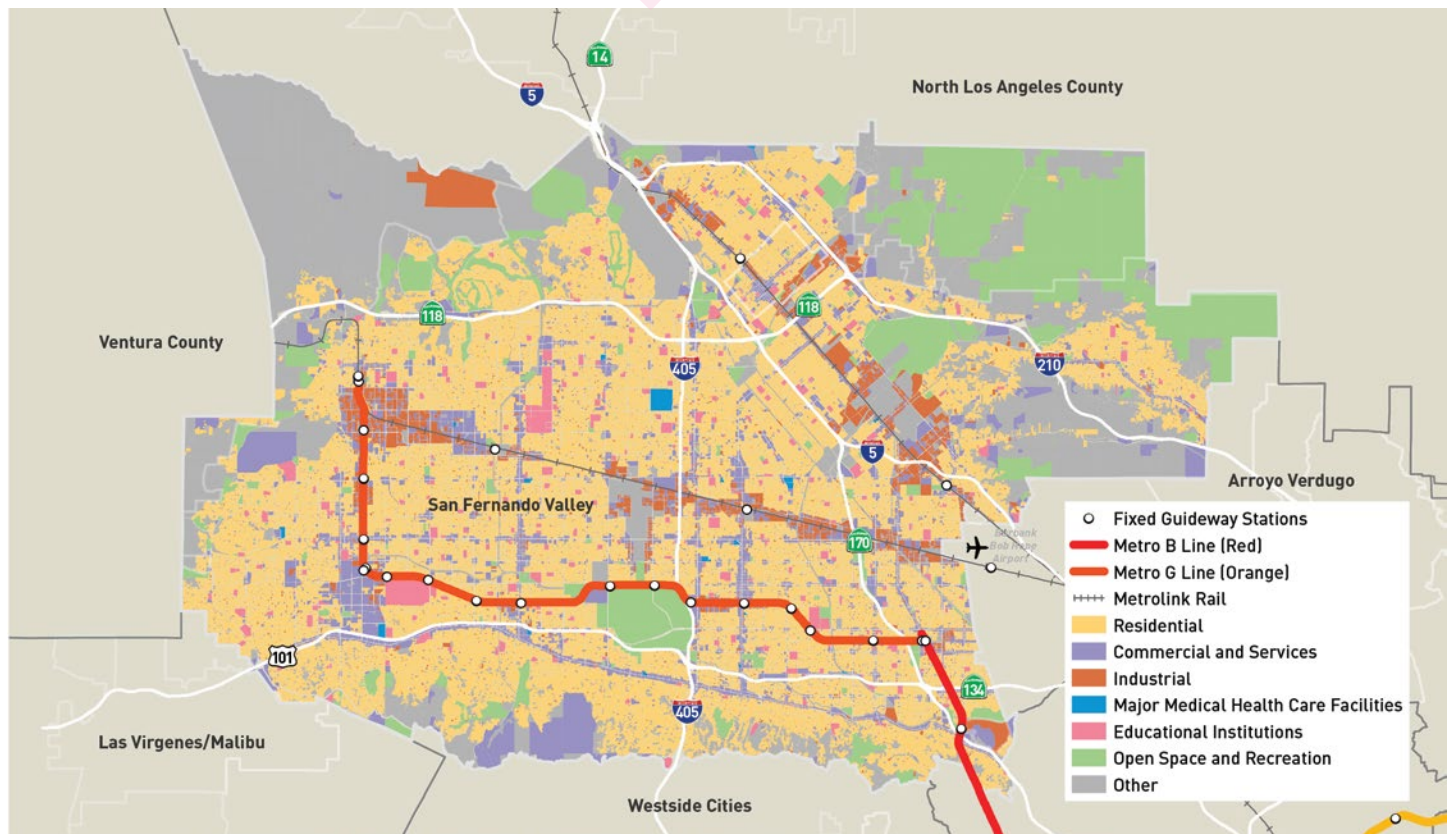
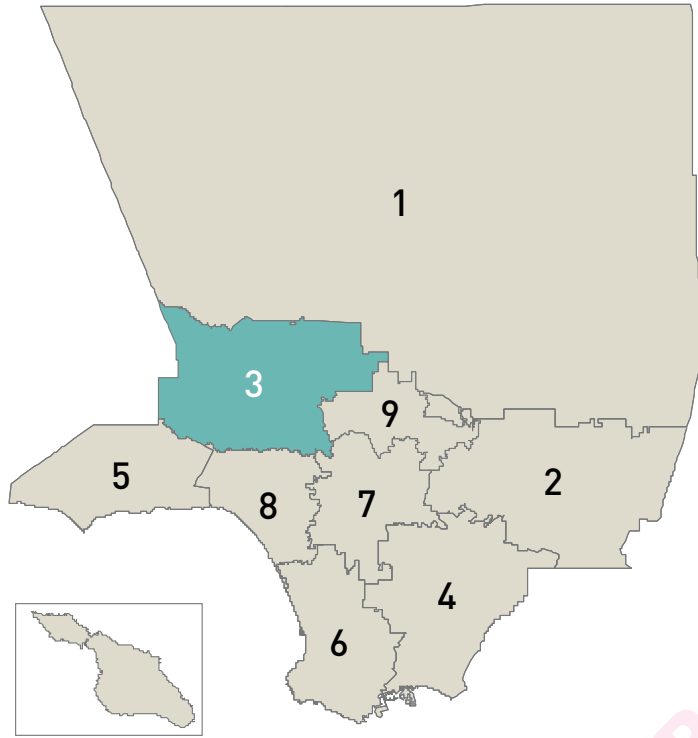


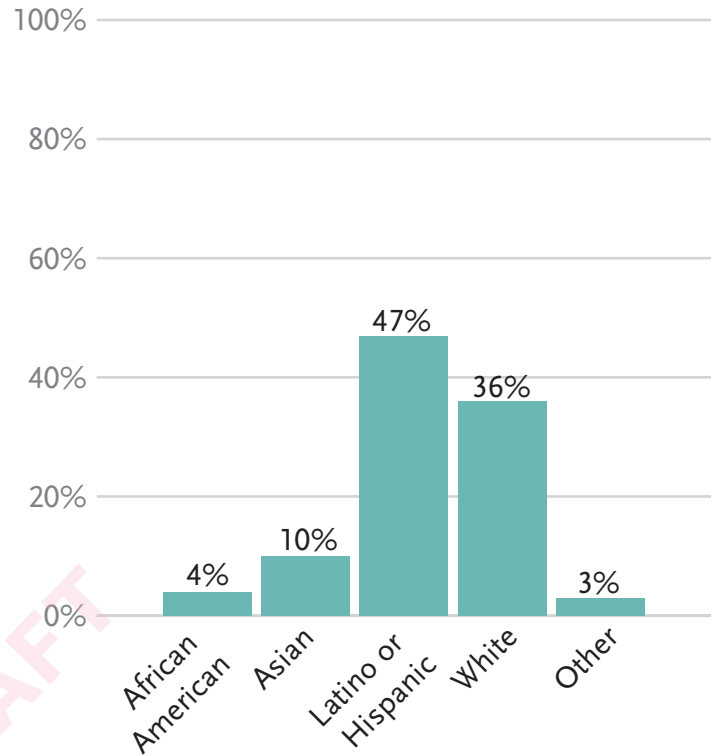
Figure 101

### San Fernando Valley Summary Demographics

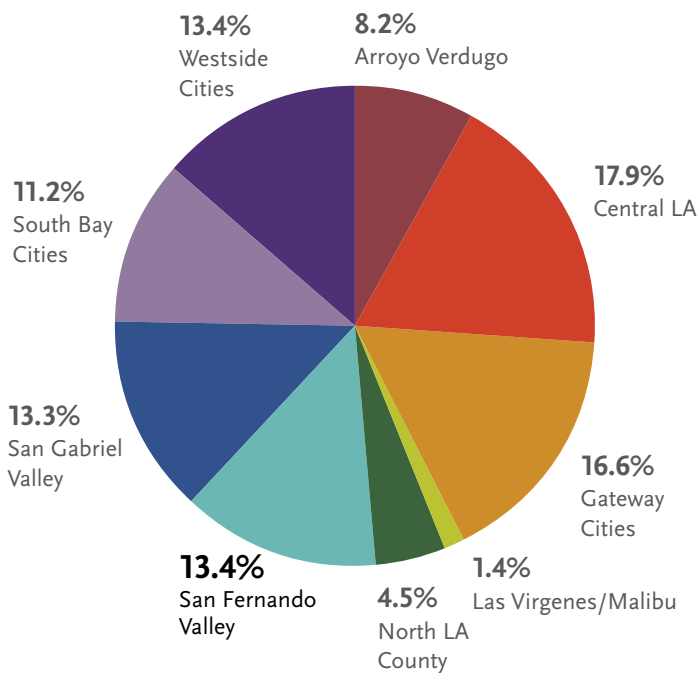
Total Area 269 Square Miles, Rank 3rd  
(Out of 9 Subregions)



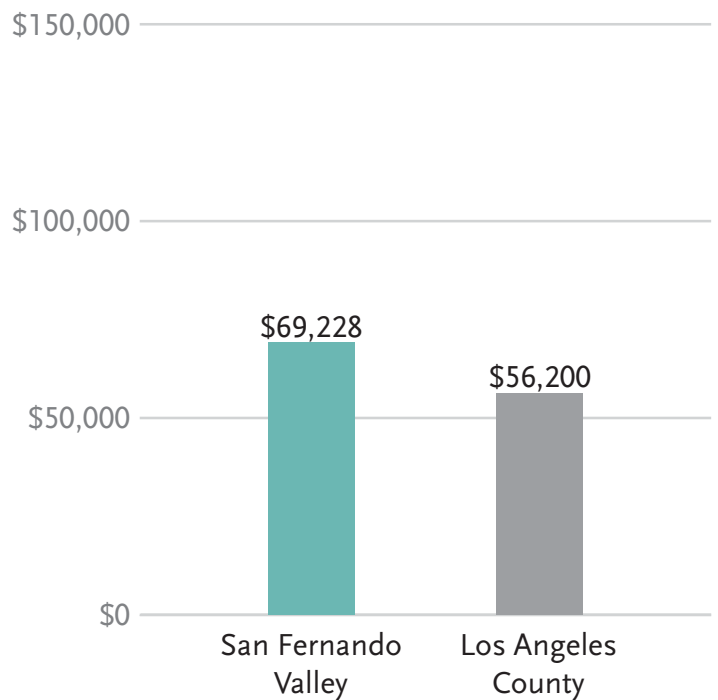
Total Population 1,514,066 People, Rank 4th



Total Employment 593,890 Jobs, Rank 3rd



Median Household Income \$69,228 Average MHI, Rank 5th





# San Gabriel Valley

San Gabriel Valley includes Alhambra, Arcadia, Azusa, Baldwin Park, Bradbury, Claremont, Covina, Diamond Bar, Duarte, El Monte, Glendora, Industry, Irwindale, La Puente, La Verne, Monrovia, Monterey Park, Pomona, Rosemead, San Dimas, San Gabriel, San Marino, Sierra Madre, South El Monte, Temple City, Walnut, and West Covina. San Gabriel Valley also includes the following unincorporated communities of LA County: Altadena, Avocado Heights, Charter Oak, Citrus, East Pasadena, East San Gabriel, Hacienda Heights, Mayflower Village, North El Monte, Rowland Heights, San Pasqual, South Monrovia Island, South San Gabriel, South San Jose Hills, Valinda, Vincent, and West Puente Valley.

The subregion is home to several colleges, including Cal State Pomona, University of La Verne, the Claremont Colleges, Citrus College, East LA College, and Mt. San Antonio College. Major medical facilities include Alhambra Hospital Medical Center, Methodist Hospital, Harbor-UCLA Medical Center, and Kaiser Permanente South Bay Medical Center.

## Major Transportation Facilities

One of the unique transportation features of this subregion is the significant number of freeways that traverse it; namely, San Bernardino Freeway (I-10), Foothill Freeway (I-210), Pasadena Freeway (SR-110), Orange Freeway (SR-57), Pomona Freeway (SR-60), Chino Valley Freeway (SR-71), San Gabriel River Freeway (I-605) and the Long Beach Freeway (I-710). The Foothill Freeway has a carpool lane in each direction through the entire San Gabriel Valley subregion. Carpool lanes also exist on portions of I-10, I-605, and SR-60.

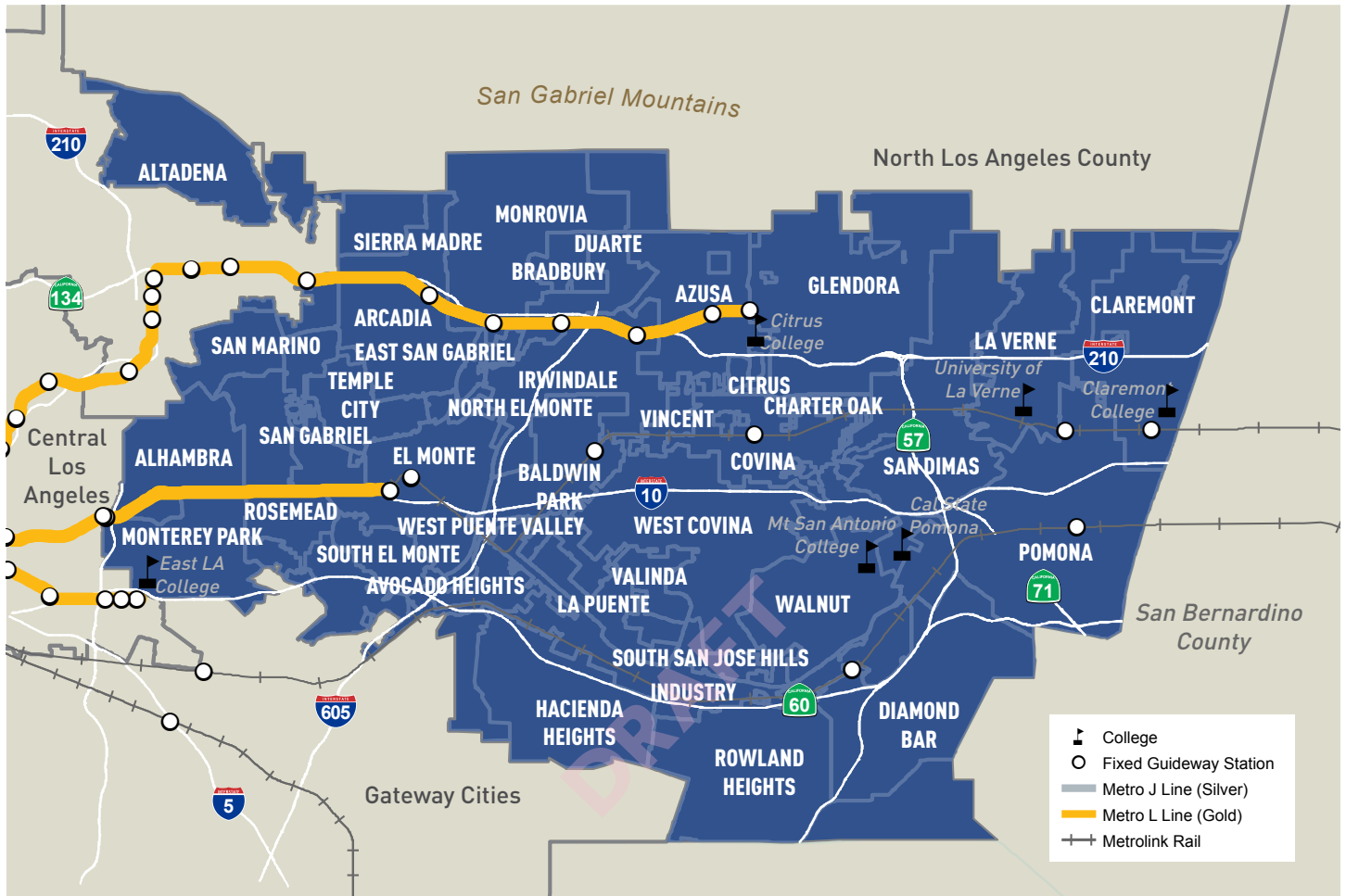
The El Monte Busway on the I-10 serves both buses and carpools and is the highest-volume carpool facility in LA County. Metro, Foothill, and Montebello Transit provide bus service to the subregion. Most cities in this subregion provide dial-a-ride services within their city limits to seniors and persons with disabilities.

## Land Use and Demographics

Figure 107 below shows the breakdown of land use for communities within the subregion. The City of Industry has the largest percentage of commercial/industrial land use and the highest employment density in the area. The communities of South Monrovia Island and South San Gabriel have the highest percentage of residential land use area. The Cities of Industry and Irwindale contains the largest total area for commercial/industrial use.

Figure 102

**SAN GABRIEL VALLEY**



The City of Alhambra has the highest daily trip density in the subregion. The city is split by the I-10, which serves both buses and carpools and has the highest volume carpool facility in LA County. Population, employment, and trip densities can be seen clustering in or near the City of Alhambra, Rosemead, El Monte, South El Monte, Baldwin Park, Irwindale, Covina, La Puente, Azusa, Duarte, West Puente Valley, South San Jose Hills, and Pomona, and the southern portion of Claremont. The City of Industry has the highest employment density in the subregion. The highest population density area can be found in the community of San Jose Hills, but the highest total population is in the City of Pomona. Zero-vehicles households are dispersed throughout the region, with most of the tracts clustering around Alhambra, Monterey Park, El Monte, Duarte, La Verne, Claremont, and Pomona.

Major medical facilities include Arcadia Methodist Hospital, City of Hope, Kaiser Permanente Baldwin Park, and Pomona Valley Hospital. The San Gabriel Valley is also home to several universities including Cal State Poly Pomona, Azusa Pacific University, and University of La Verne.

The San Gabriel Valley subregion sits in the easternmost portion of LA County. It covers 322 square miles and is approximately 99 percent built-out, leaving very little undeveloped land for commercial or industrial uses.

The subregion encompasses 31 jurisdictions and is home to 570,000 jobs. The area is also characterized by socioeconomic and ethnic diversity and is comprised of some of the most affluent as well as the lowest-income communities within LA County.

## Major Projects and Programs

The subregion's major transportation investments include the Gold Line Foothill Extension to Claremont and multiple interchange projects. San Gabriel Valley has several subregional programs including significant funding for active transportation and highway programs.

Figure 103

### San Gabriel Valley Projects and Multi-year Subregional Programs

CATEGORIES	DESCRIPTION
Major Projects (YOE \$)	Gold Line Foothill Extension to Claremont \$1.57 B (2028)
	SR-71 Gap from I-10 to Rio Rancho Rd \$637 M (2026)
	SR-57/SR-60 Interchange Improvements \$422 M (2027)
	I-605/I-10 Interchange \$1.29 B (2047)
	SR 60/I-605 Interchange HOV Direct Connectors \$1.06 B (2047)
Multi-year Subregional Programs (in 2015 \$)	Active Transportation Program (Including Greenway Proj.) \$231 M (Start Date FY 2018)
	Bus System Improvement Program \$55 M (Start Date FY 2018)
	First/Last Mile and Complete Streets \$198 M (Start Date FY 2018)
	Highway Demand Based Program (HOV Ext. & Connect.) \$231 M (Start Date FY 2018)
	Goods Movement (Improvements & RR Xing Elim.) \$33 M (Start Date FY 2048)
	Highway Efficiency Program \$534 M (Start Date FY 2048)
	ITS-Technology Program (Advanced Signal Tech.) \$66 M (Start Date FY 2048)

Source: [https://theplan.metro.net/wp-content/uploads/2016/09/FactSheet\\_SGV.pdf](https://theplan.metro.net/wp-content/uploads/2016/09/FactSheet_SGV.pdf)

Figure 104

**SAN GABRIEL VALLEY DAILY TRIPS**

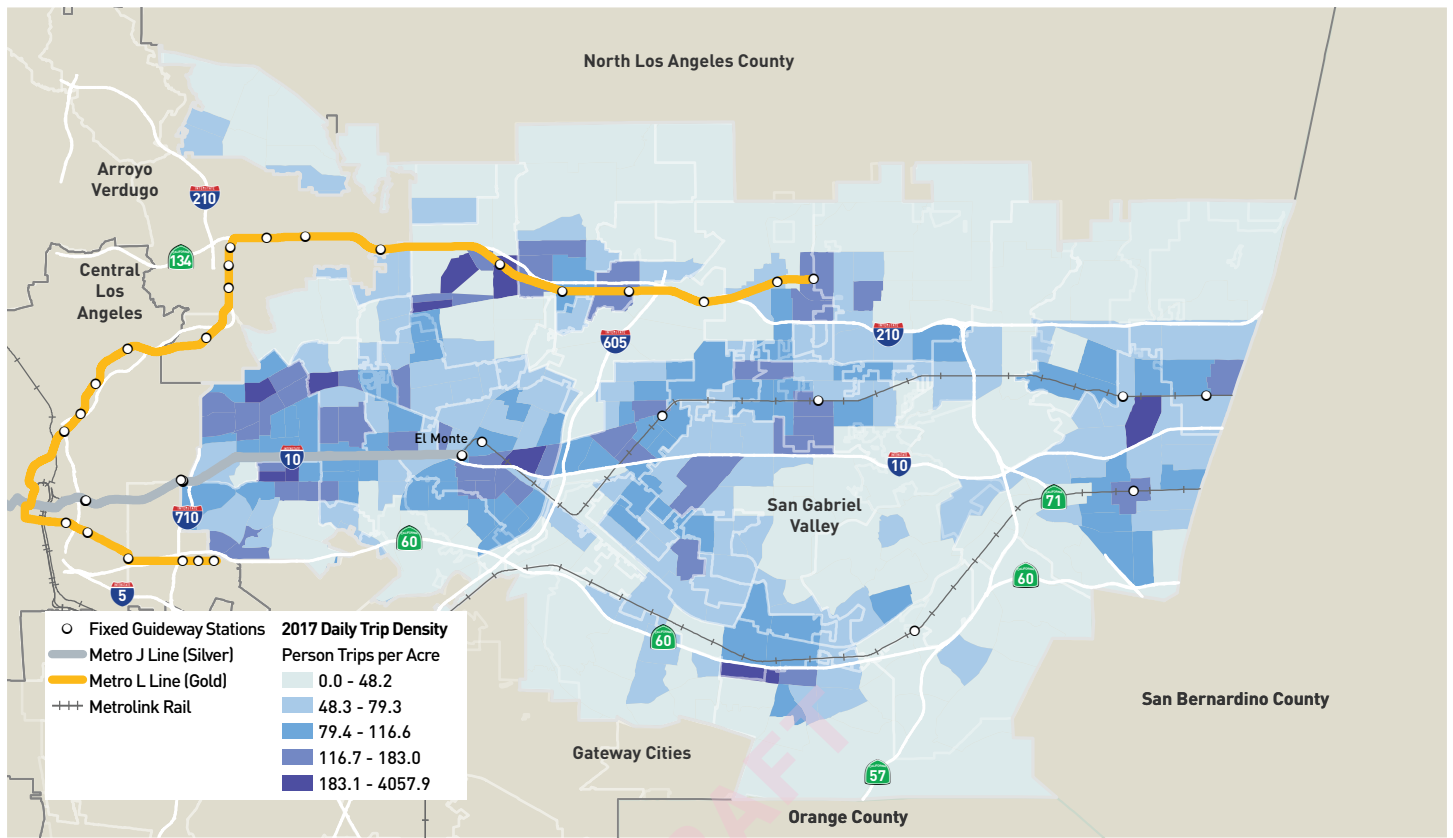


Figure 105

**SAN GABRIEL VALLEY EMPLOYMENT DENSITY**

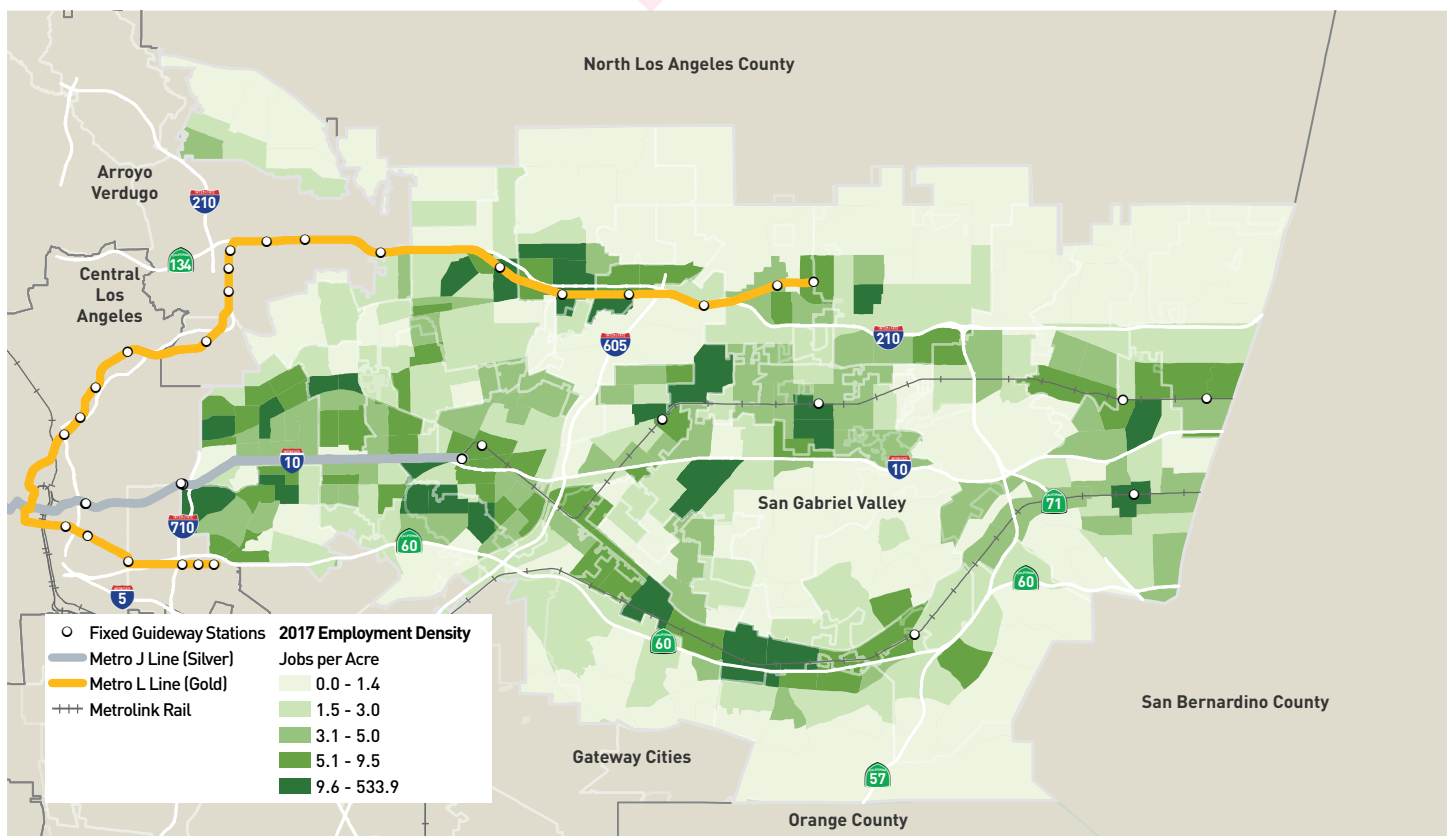


Figure 106

### SAN GABRIEL VALLEY POPULATION DENSITY

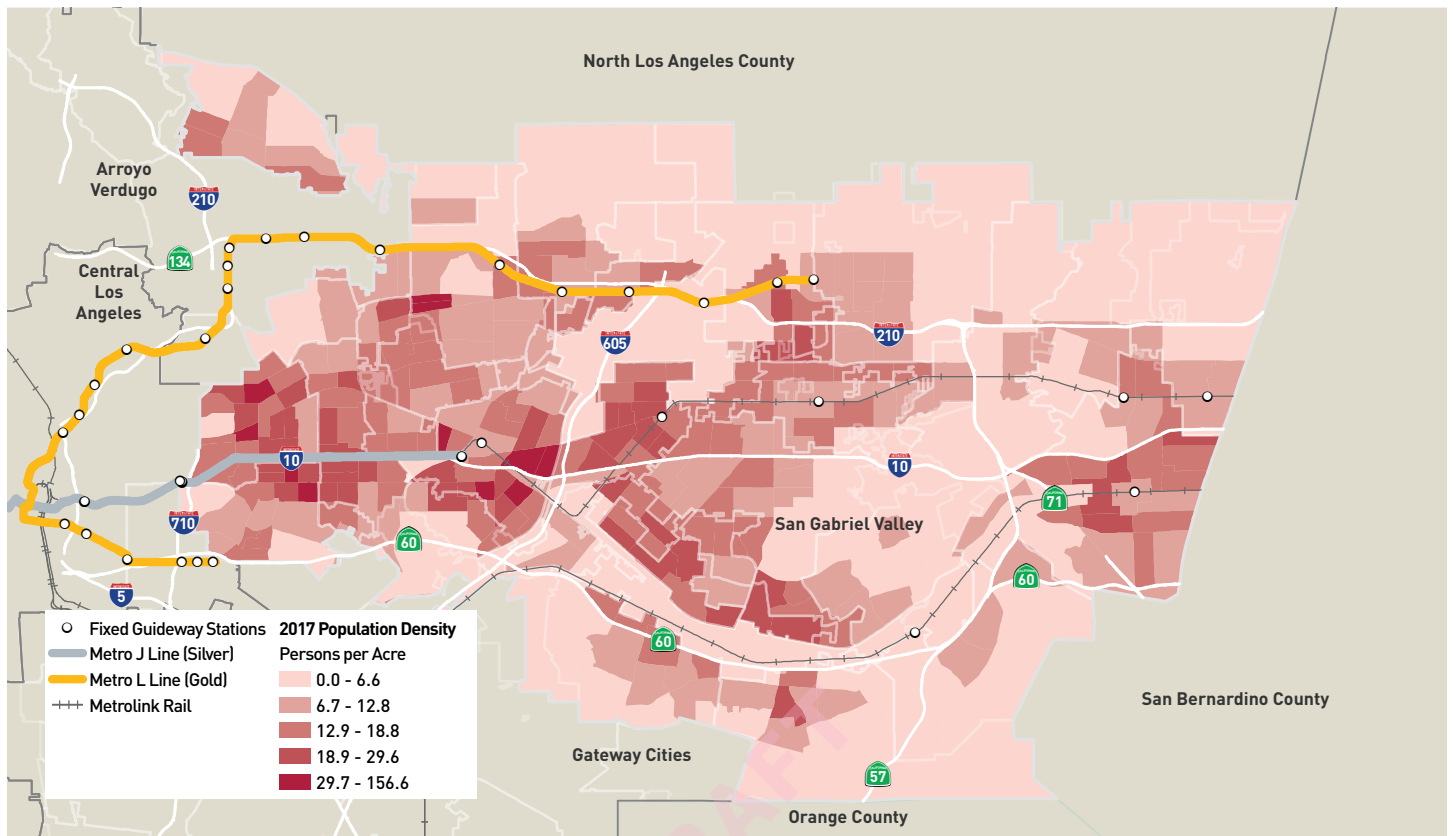


Figure 107

### SAN GABRIEL VALLEY LAND USE

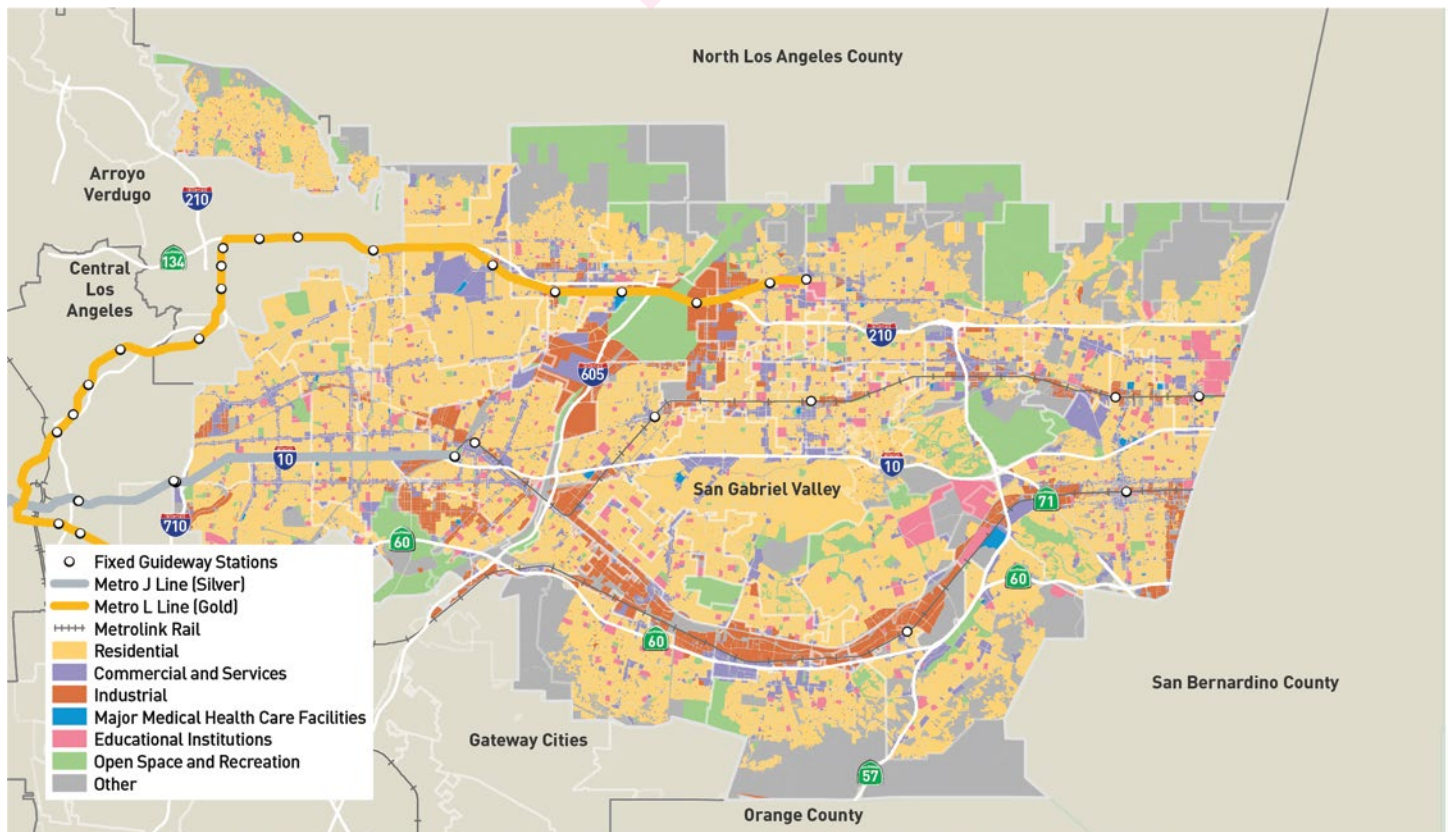
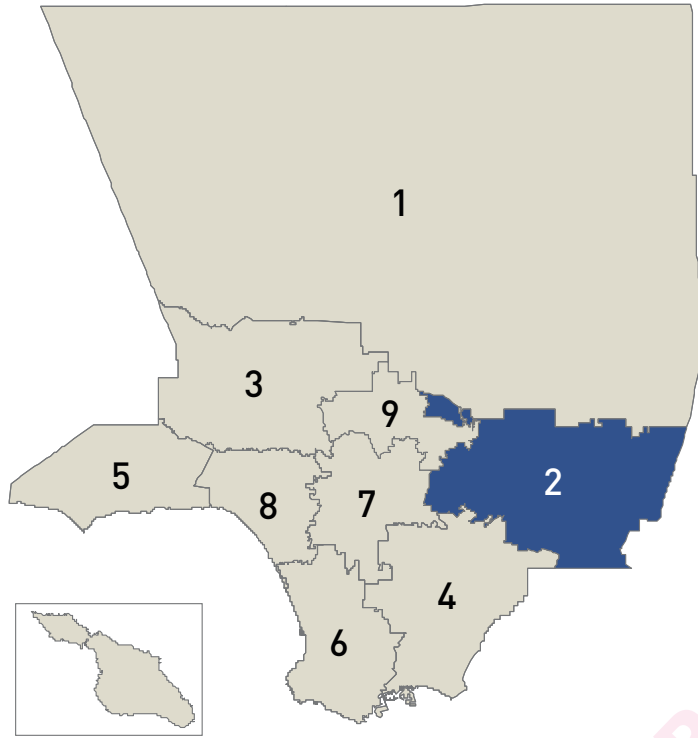


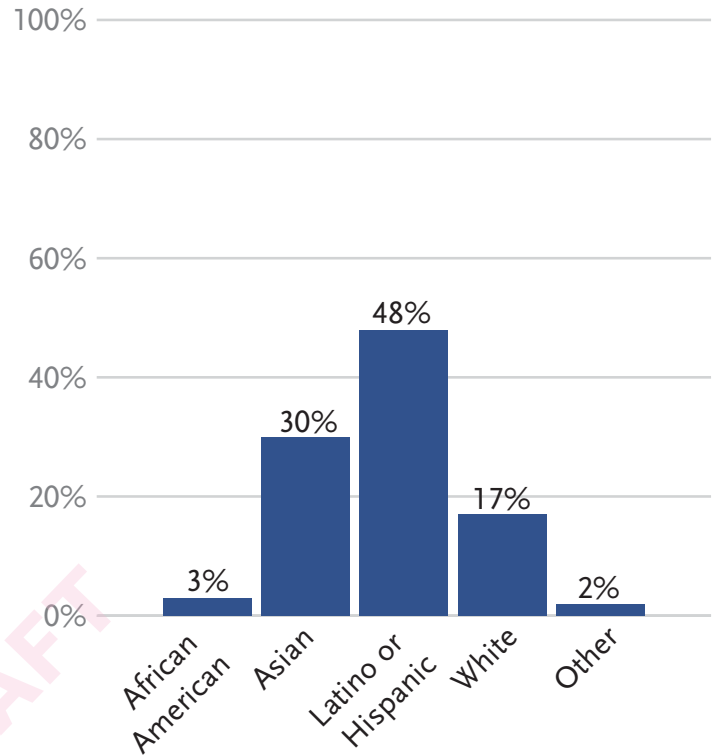
Figure 108

### San Gabriel Valley Summary Demographics

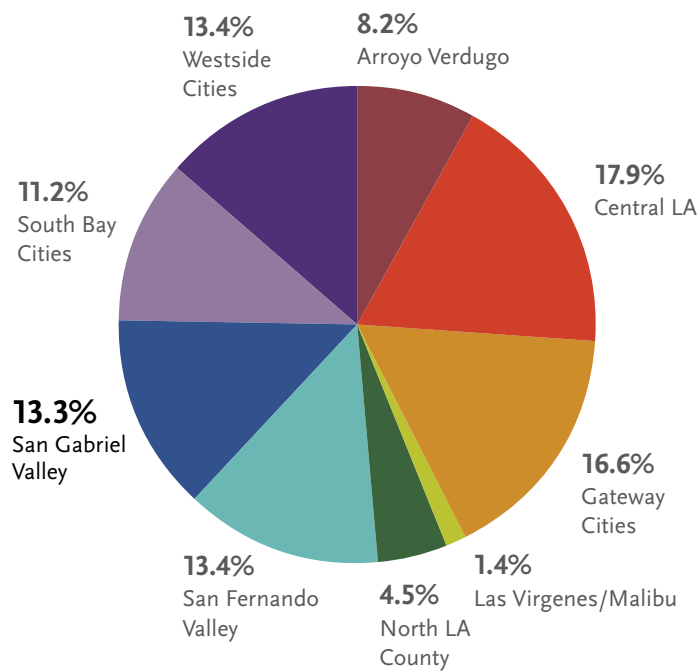
Total Area 324 Square Miles, Rank 2nd  
(Out of 9 Subregions)



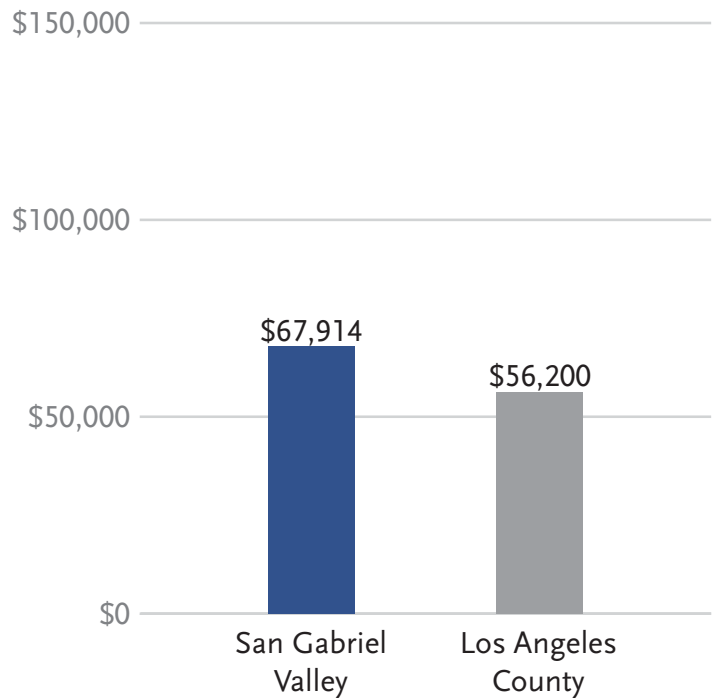
Total Population 1,618,858 People, Rank 3rd



Total Employment 587,628 Jobs, Rank 5th



Median Household Income \$67,914 Average MHI, Rank 7th





# South Bay Cities

**South Bay Cities include portions of Los Angeles, Carson, El Segundo, Gardena, Hawthorne, Hermosa Beach, Inglewood, Lawndale, Lomita, Manhattan Beach, Palos Verdes Estates, Rancho Palos Verdes, Redondo Beach, Rolling Hills, Rolling Hills Estates, and Torrance. South Bay Cities also include the following unincorporated communities of LA County: Alondra Park, Del Aire, Lennox, West Athens, West Carson, and Westmont.**

## Major Transportation Facilities

The Glenn Anderson (Century, I-105), Harbor (I-110) and the San Diego (I-405) freeways serve the South Bay area. SR-91 terminates near the eastern portion of the subregion, near Harbor Gateway Transit Center. A transitway, which provides elevated carpool lanes and a busway, runs down the center of the Harbor Freeway from USC in Central Los Angeles southwards to SR-91. A unique feature of the carpool lanes on the I-110 and I-105 Freeways is that they flow directly into each other via an elevated direct connector interchange, bypassing the at-grade interchange used by other traffic. In addition, the South Bay is traversed with major arterials that carry capacity that is equivalent to the local freeway system. These major arterials include Hawthorne Bl, Pacific Coast Hwy, Sepulveda Bl, Crenshaw Bl, Artesia Bl, Lomita Bl, Manhattan Beach Bl, Douglas St, Rosecrans Av, and 190th St as well as others.

The South Bay has two major transportation hubs near its borders – LAX, and the Port of Los Angeles. LAX passenger trips substantially add to traffic volumes on the freeways and surface streets traversing the area. Cargo and truck traffic also impact the subregion's transportation system. During the economic downturn in the 1990s, the South Bay adapted existing business structures to warehousing, which has led to increased truck traffic, added congestion and associated pavement damage on arterials and freeways (I-405 and I-110). At the same time, transporting goods into and out of the subregion has added traffic volumes to the freeways, placing additional capacity pressure on the aging onramps.

The Metro Green Line runs in the median of the I-105 Freeway from Norwalk in the east to the southern edge of Los Angeles International Airport (LAX) and south to Redondo Beach. A long segment of the Alameda Corridor runs along the subregion's eastern border. The area has regional and local transit services provided by Metro, Torrance Transit, Municipal Area Express (MAX), Gardena Municipal Bus Lines, Long Beach Transit, Palos Verdes Transit, Beach Cities Transit, Carson Circuit, Lawndale Beat, and LADOT's Commuter Express. In addition, many local jurisdictions operate transit and dial-a-ride services within their boundaries.

Figure 109  
**SOUTH BAY CITIES**



## Land Use and Demographics

Roughly 19 percent of the subregion is designated for commercial/industrial land use and residential land use covers approximately 37 percent. Figure 114 below shows the breakdown of land use for communities within the subregion. City of Los Angeles is the largest city in the subregion. The city of Rolling Hills has the largest percentage of residential land use but the lowest population density in the subregion. City of Torrance has the largest total area for residential land use. City of El Segundo has the highest percentage of industrial land use but the City of Carson has the largest total area. City of Los Angeles has the largest total commercial area, followed by the City of Torrance.

In addition, major trip generators/attractors such as the StubHub Center, The Forum, and Hollywood Park, add to the considerable demand for commuter and entertainment travel and overall travel mobility needs of the subregion. Trip and population density clusters in the areas along I-405, I-110, and I-105 Freeways. High population and trip densities tends to occur in most areas north of Pacific Coast Highway and in the San Pedro community. City of El Segundo has the highest employment density, followed by Hermosa Beach and Torrance.

The South Bay Cities subregion is located at the southern end of the Santa Monica Bay. This subregion covers 154 square miles and is home to 16 cities and unincorporated County areas. The west and southern portion of the subregion is bounded by the Pacific Ocean. El Porto Beach, Abalone Cove, and Venice Beach are major attractions for surfers and other beach activities. Cal State Dominguez Hills is located in the City of Carson. Major medical facilities include Harbor-UCLA Medical Center, Kaiser Permanente South Bay Medical Center, and Children’s Hospital Los Angeles.

## Major Projects and Programs

Upcoming transportation projects in South Bay Cities include the airport Metro Connector and the I-105 ExpressLane, which will both provide added accessibility to LAX. Highway Operational Improvements and Transportation System and Mobility Improvements are the two South Bay Cities subregional programs.

Figure 110

### South Bay Cities Projects and Multi-year Subregional Programs

CATEGORIES	DESCRIPTION
Major Projects (YOE \$)	Airport Metro Connector/96th Street Station/ Green Line Ext LAX \$626 M (2024)
	I-105 ExpressLane from I-405 to I-605 \$530 M (2025)
	C Line (Green) Extension to Torrance \$1.17 B (2030)
	I-405/I-110 Interchange HOV Connect Ramps and Interchange Improvements \$504 M (2044)
	I-110 ExpressLanes Extension South to I-405/ I-110 Interchange \$599 M (2046)
	I-405 South Bay Curve Improvements \$883 M (2047)
	Sepulveda Transit Corridor, Phase 2 (Westside to LAX) 10.59 B (2057) (\$18.27 B total cost)
Multi-year Subregional Programs (in 2015 \$)	South Bay Highway Operational Improvements \$500 M (\$1.1 B total cost) (Start Date FY 2018)
	Transportation System and Mobility Improvements Program \$643.5 M (Start Date FY 2018)

Source: [https://theplan.metro.net/wp-content/uploads/2016/09/FactSheet\\_South\\_Bay.pdf](https://theplan.metro.net/wp-content/uploads/2016/09/FactSheet_South_Bay.pdf)

Figure 111

**SOUTH BAY CITIES DAILY TRIPS**

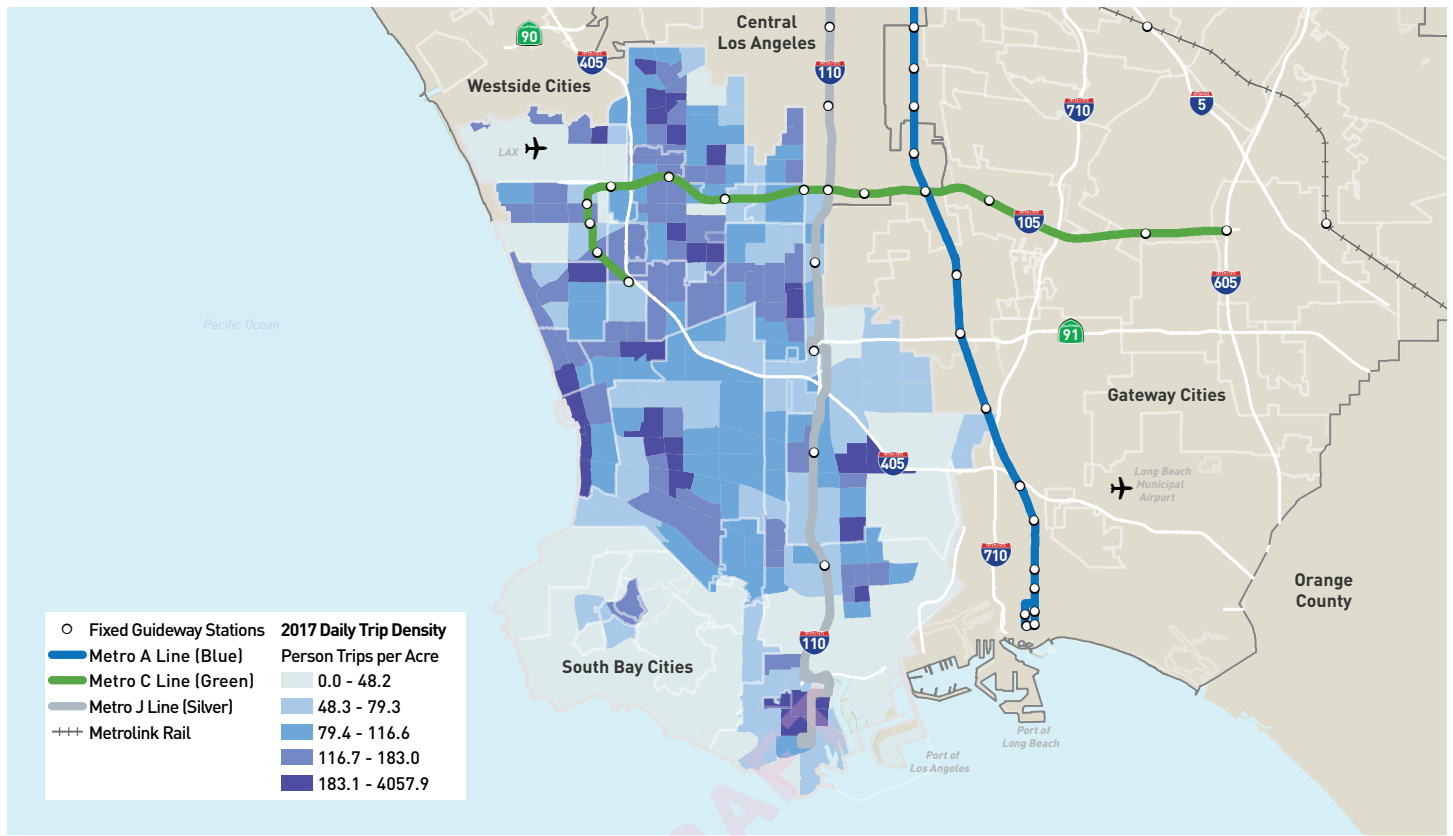


Figure 112

**SOUTH BAY CITIES EMPLOYMENT DENSITY**

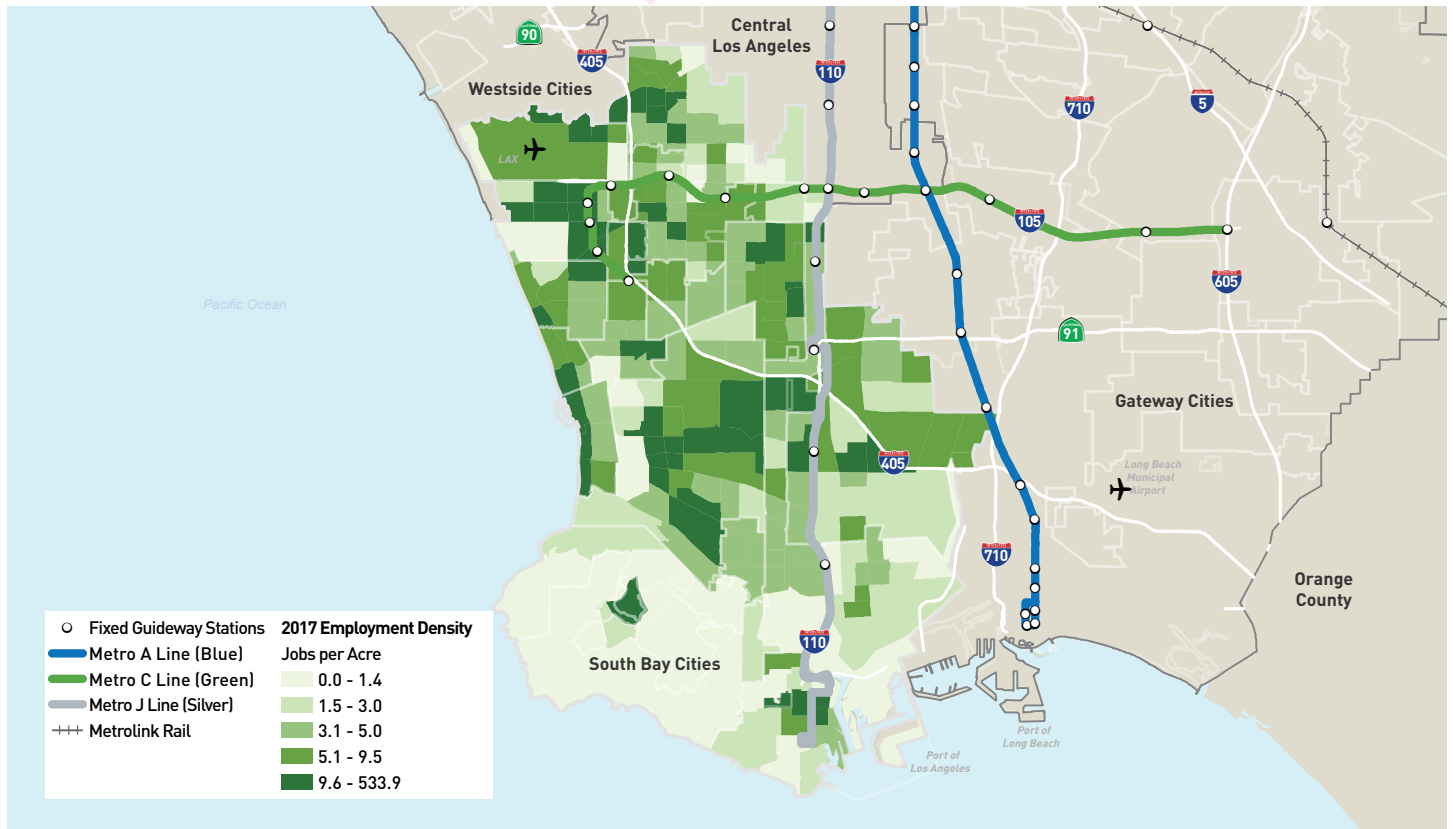


Figure 113

### SOUTH BAY CITIES POPULATION DENSITY

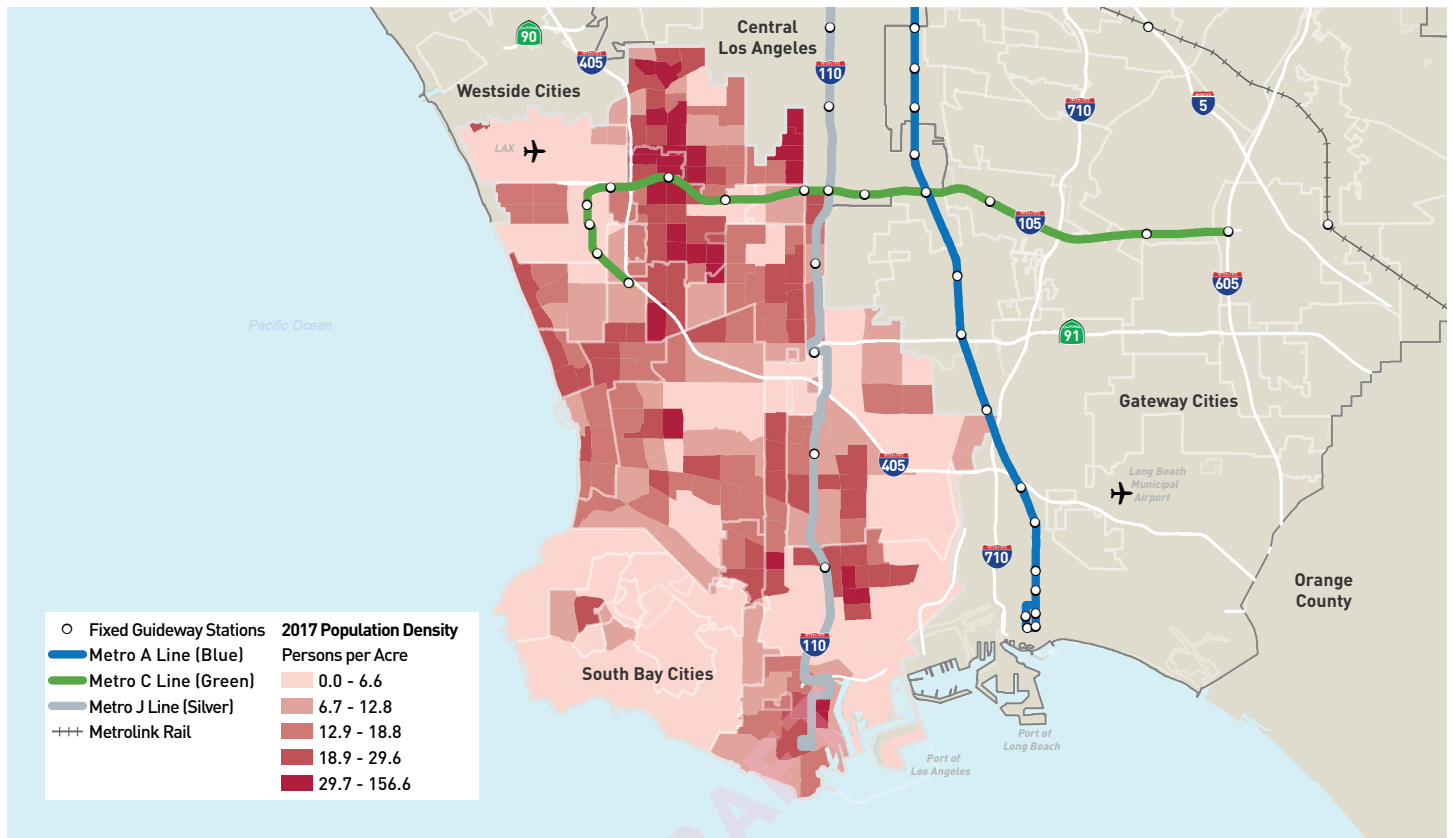


Figure 114

### SOUTH BAY CITIES LAND USE

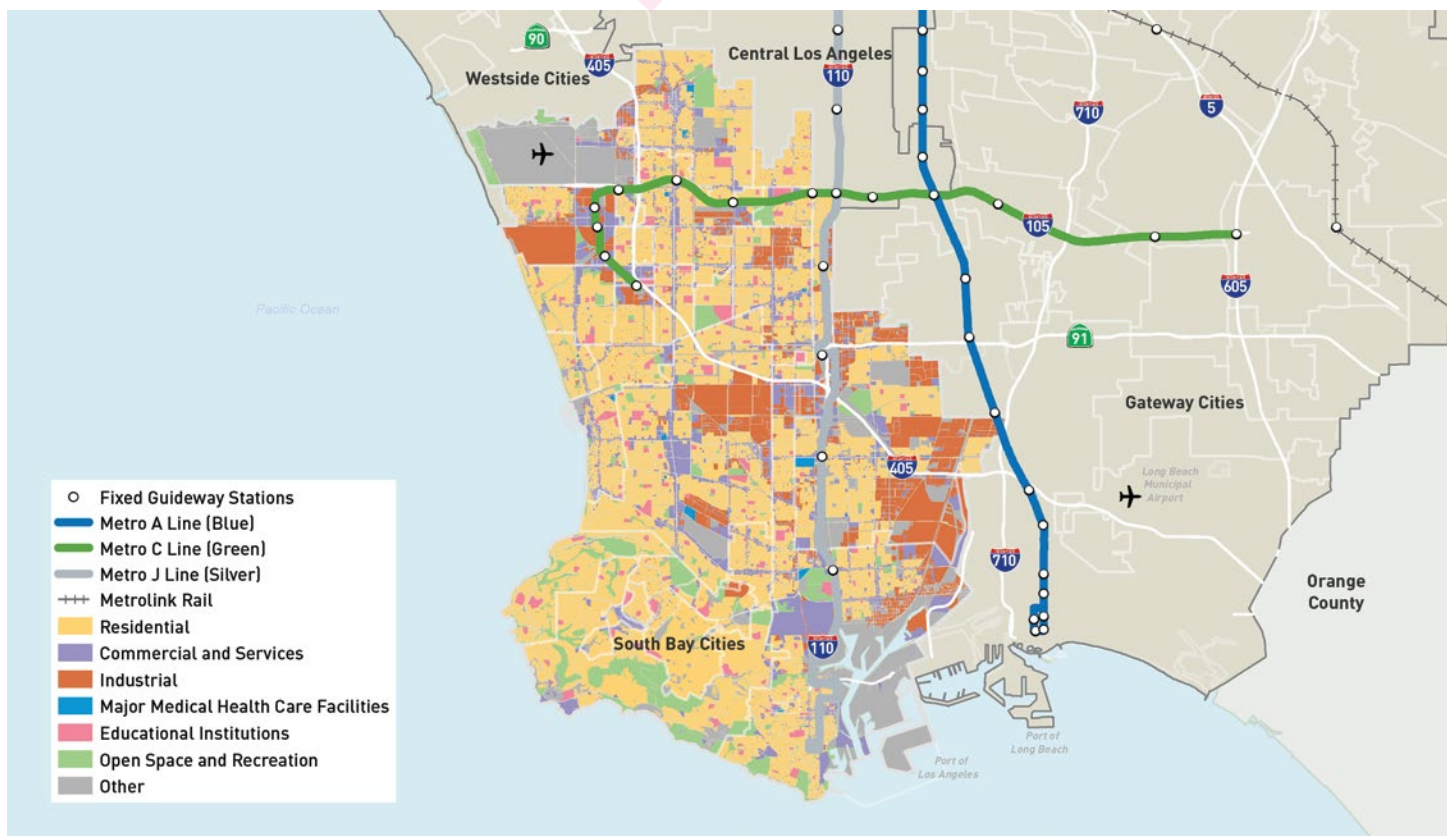
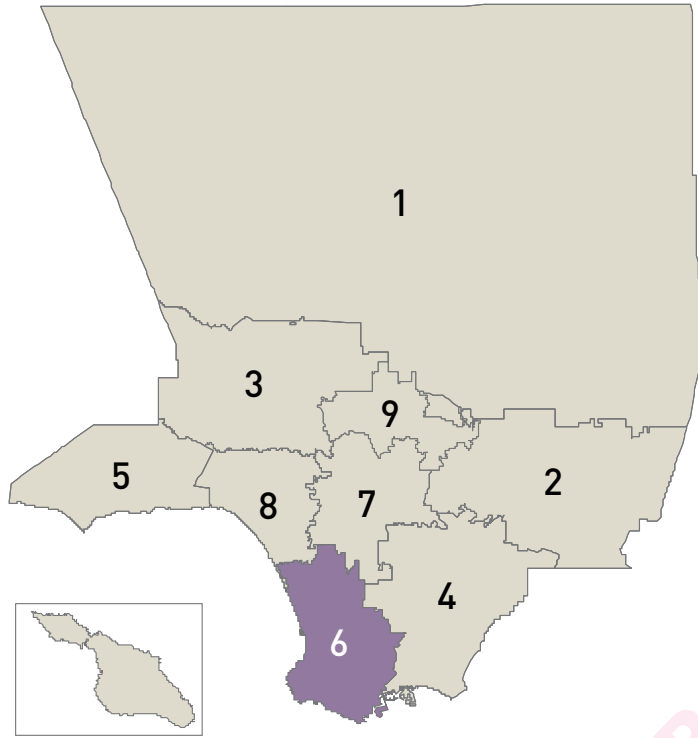


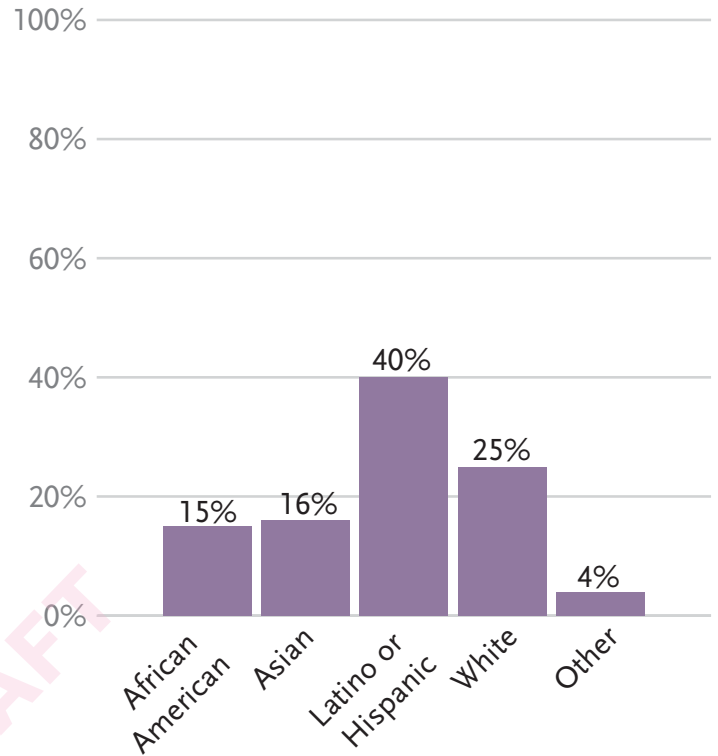
Figure 115

**South Bay Cities Summary Demographics**

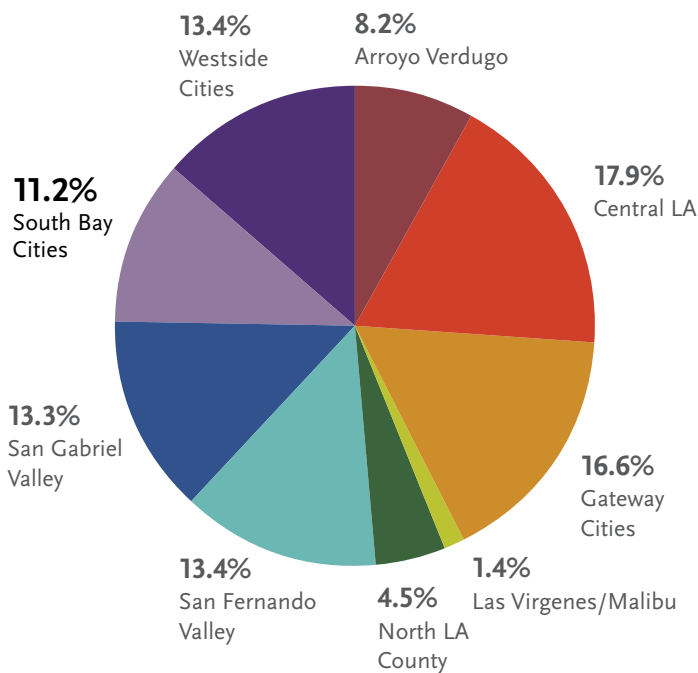
Total Area 154 Square Miles, Rank 6th  
(Out of 9 Subregions)



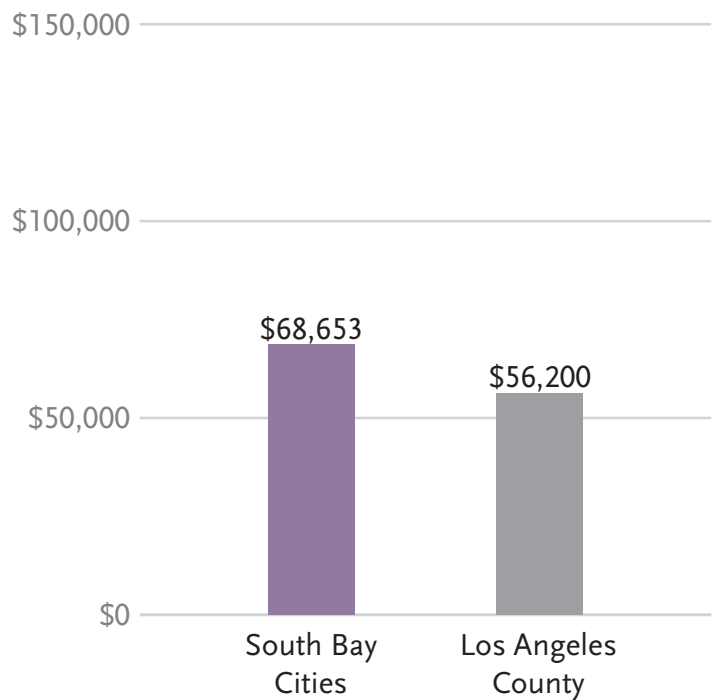
Total Population 1,050,022 People, Rank 5th



Total Employment 494,121 Jobs, Rank 6th



Median Household Income \$68,653 Average MHI, Rank 6th





# Westside Cities

Westside Cities include portions of Los Angeles, Beverly Hills, Culver City, Santa Monica, and West Hollywood. Westside Cities also include the unincorporated community of Marina Del Rey.

This subregion covers 111 square miles and is home to five cities and numerous Los Angeles City communities. It includes several historical landmarks such as the Santa Monica Looff Hippodrome, Beverly Hills Hotel, and the Werle Building.

## Major Transportation Facilities

The Santa Monica Freeway (I-10), the San Diego Freeway (I-405) and Marina Freeway (SR-90) all serve the Westside area. Several major east-west and north-south boulevards parallel I-10 and I-405, providing primary access to and within the Westside area.

The area also has an extensive network of regional and local transit services provided by Metro, LADOT's Commuter Express, Santa Monica Big Blue Bus and Culver City Bus. Currently, Metro Rapid bus service operates along Wilshire Bl, La Cienega Bl, and parts of Sepulveda Bl. Big Blue Bus operates Metro Rapid service along Lincoln Bl. Metro Rail service is provided by the E (Expo) Line. These lines provide connections to the Metro D (Purple) Line at the Wilshire/Western Station, the LAX City Bus Center, the Metro Green Line, and the downtown Santa Monica transit center.

## Land Use and Demographics

Roughly 10 percent of the subregion is designated for commercial/industrial land use and residential land use covers approximately 34 percent. Figure 121 below shows the varying land use for communities within the subregion. City of Los Angeles is the largest city in the subregion. The City of Beverly Hills has the highest percentage of residential land use but the City of Los Angeles has the largest total residential and commercial area in the subregion.

West Hollywood and Santa Monica have the highest trip densities in the county. Some of the Westside's neighborhoods (such as parts of Santa Monica, West Hollywood, Westwood and Venice) have population densities almost 10 times the county average. West Hollywood has the highest population, employment, and trip densities. The City of Los Angeles is the largest city in the subregion. It notably has the lowest employment density and has just 10 percent of land categorized for commercial/industrial use.

Figure 116  
**WESTSIDE CITIES**



The subregion has some of the top educational institutions in the nation such as University of California Los Angeles. The West Los Angeles Veterans Affairs Medical Center, which is the largest facility in the Veterans Affairs health care system, is located west of UCLA. Westside Cities is the 2nd smallest subregion, ranks 7th in total population, 4th in total employment, 6th in total daily trips, and 2nd in average median household income. The subregion has non-Hispanic Whites predominantly.

## Major Projects and Programs

The D Line (Purple) Extension and Airport Metro Connector are major transit projects to be built in the region in the next decade. The Westside Cities subregional program funding includes a total of more than \$360 Million for active transportation and first last mile investment.

Figure 117

### Westside Cities Projects and Multi-year Subregional Programs

CATEGORIES	DESCRIPTION
Major Projects (YOE \$)	Airport Metro Connector/96th Street Station/ Green Line Ext LAX \$626 M (2024)
	D Line (Purple) Extension Section 3 \$3.22 B (\$8.44 B total cost) (2028)
	Sepulveda Transit Corridor, Phase 1 – Valley to Westside \$7.69 M (2033) and Phase 2 – Westside to LAX 10.59 B (2057) (\$18.27 B total cost)
	Crenshaw Northern Extension \$4.7 B (2047) Lincoln Bl Bus Rapid Transit (BRT) \$220 M (2047)  Lincoln Bl Bus Rapid Transit
Multi-year Subregional Programs (in 2015 \$)	Active Transportation First/Last Mile Connections Program \$361 M (Start Date FY 2018)

Source: [https://theplan.metro.net/wp-content/uploads/2016/09/FactSheet\\_Westside.pdf](https://theplan.metro.net/wp-content/uploads/2016/09/FactSheet_Westside.pdf)

Figure 118

**WESTSIDE CITIES DAILY TRIPS**

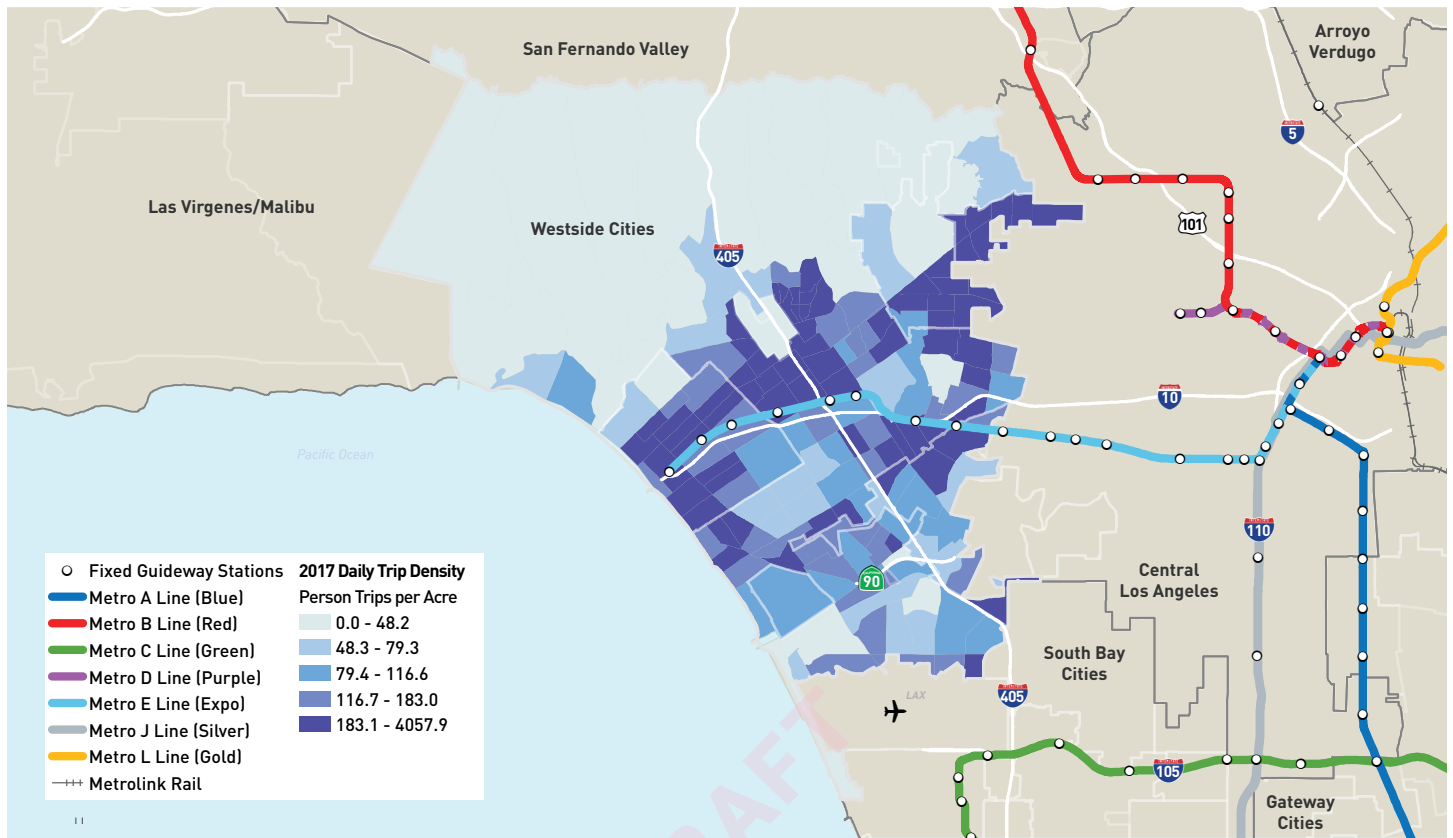


Figure 119

**WESTSIDE CITIES EMPLOYMENT DENSITY**

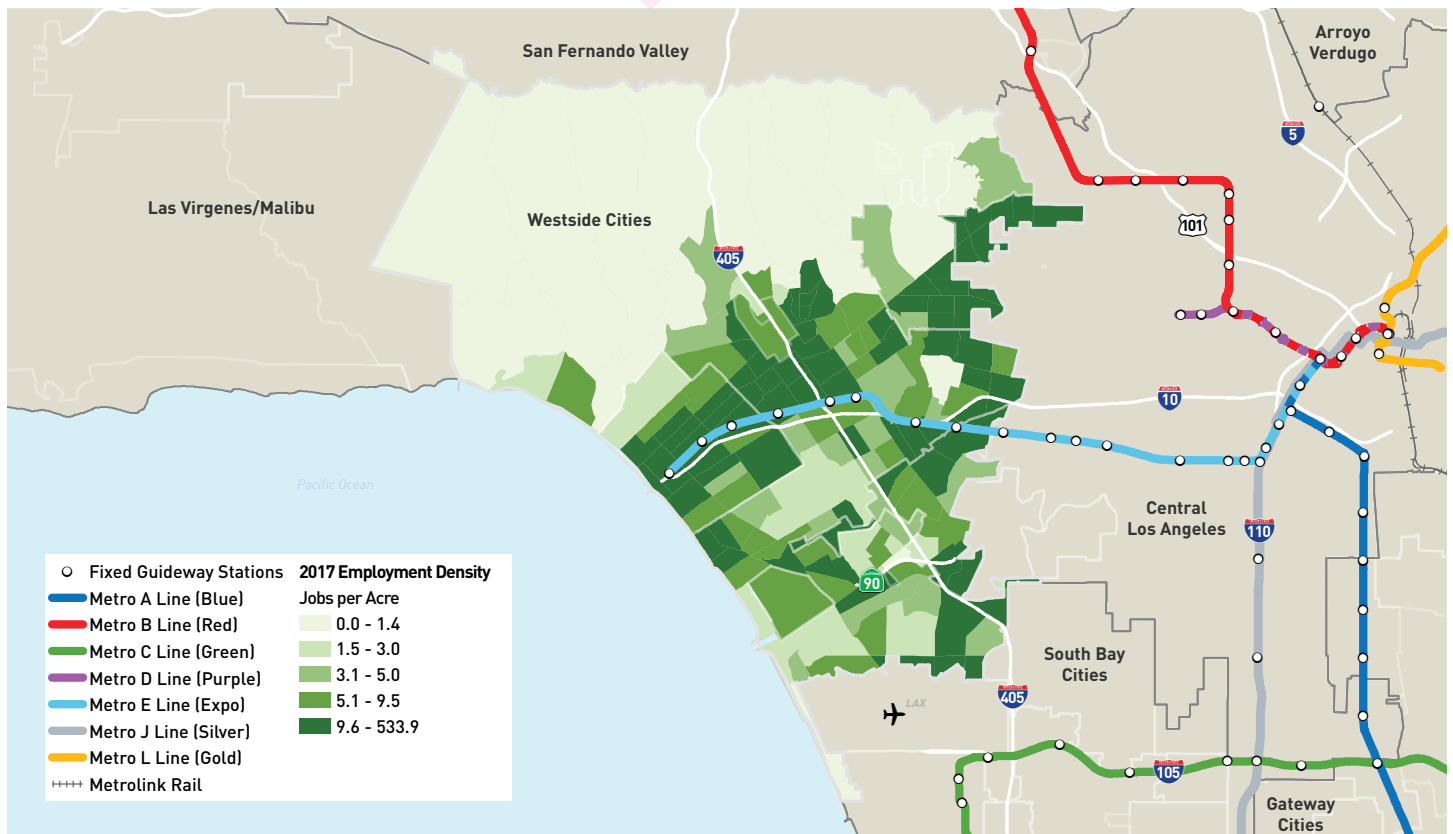


Figure 120

## WESTSIDE CITIES POPULATION DENSITY

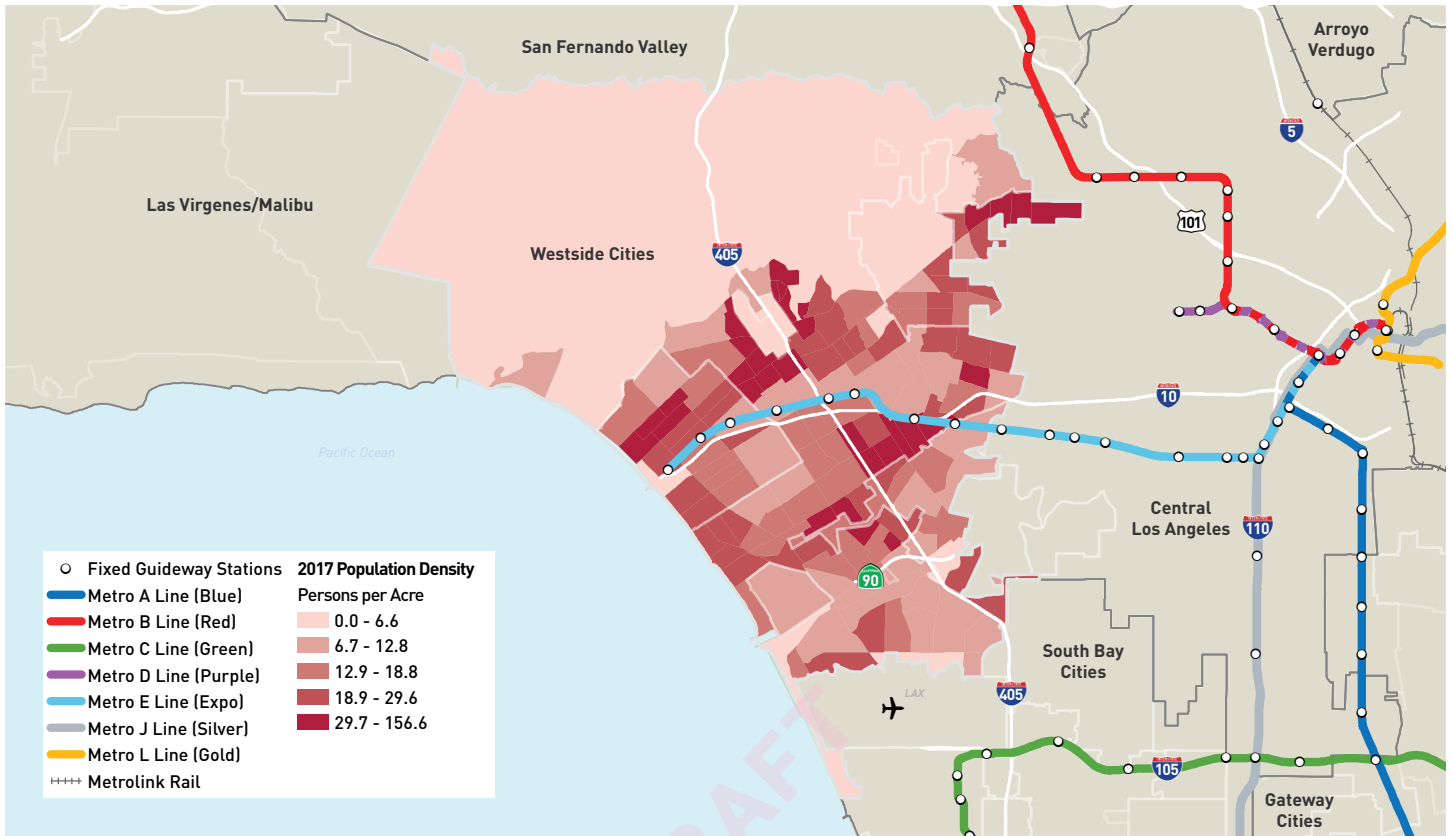


Figure 121

## WESTSIDE CITIES LAND USE

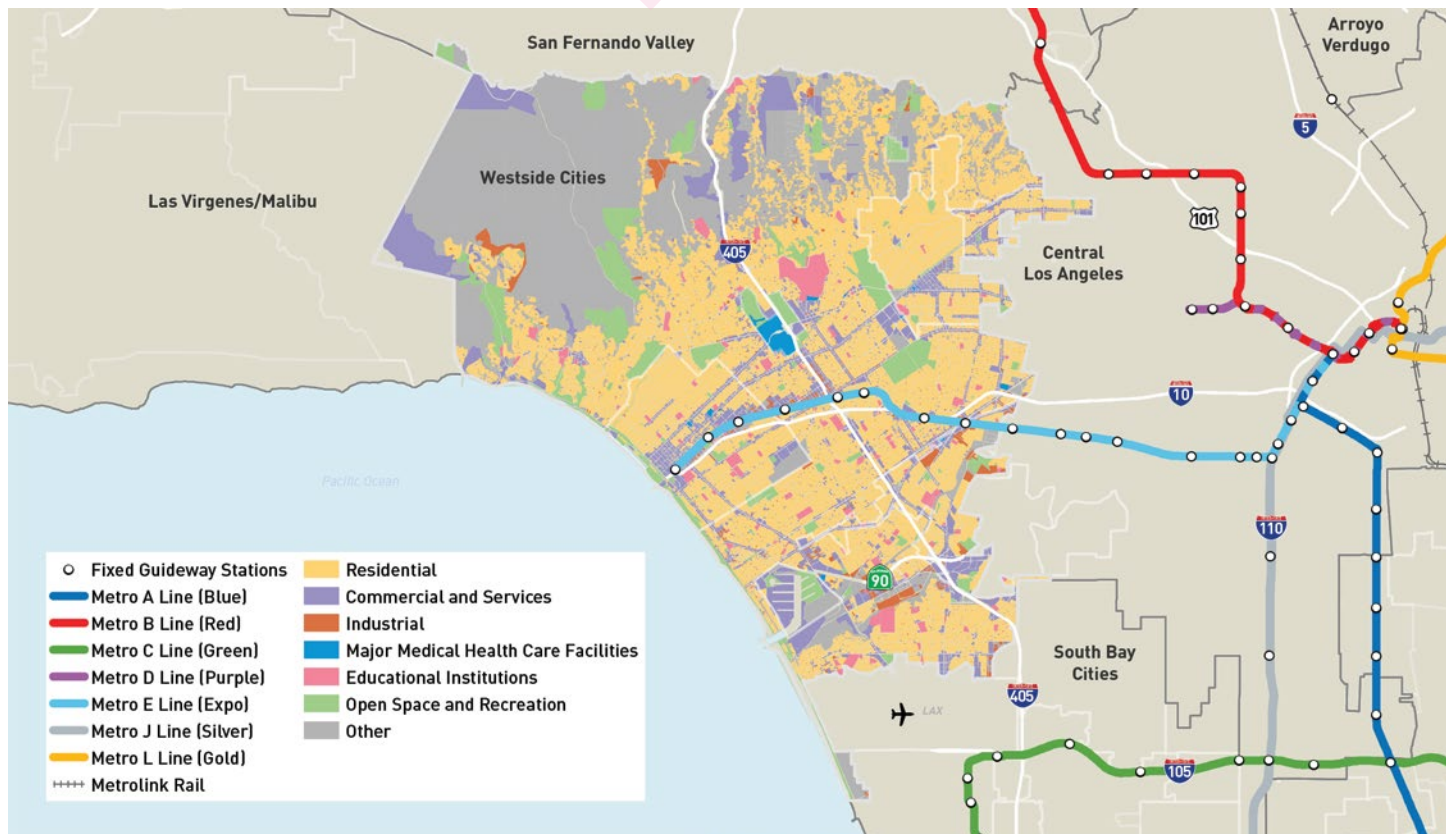
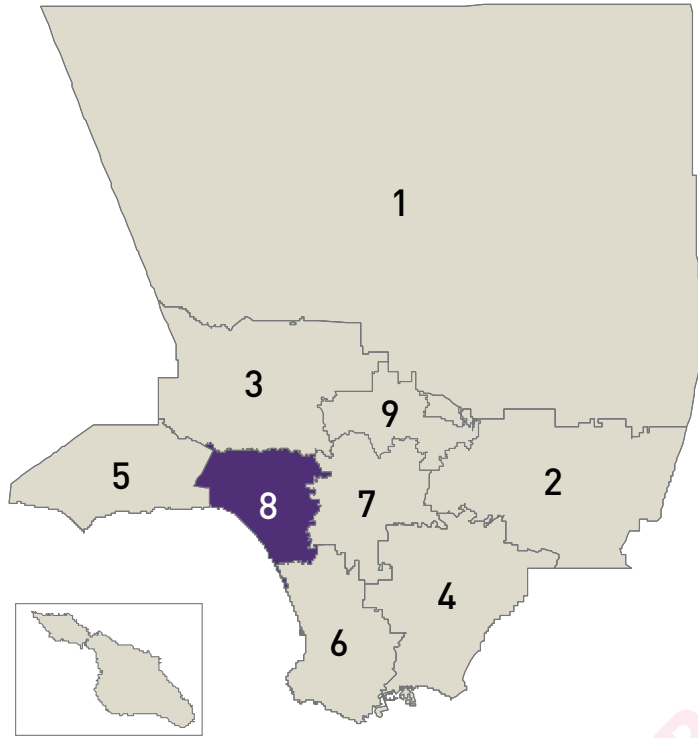


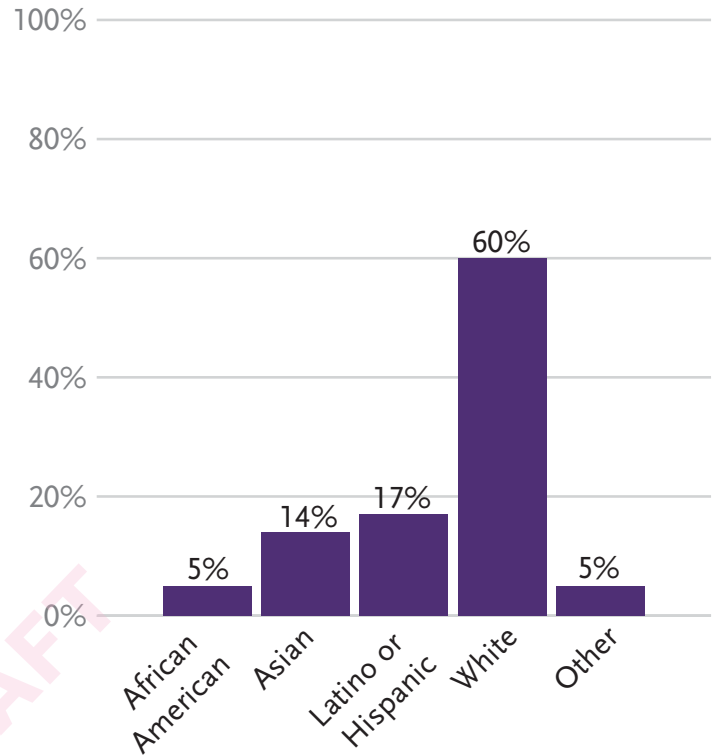
Figure 122

### Westside Cities Summary Demographics

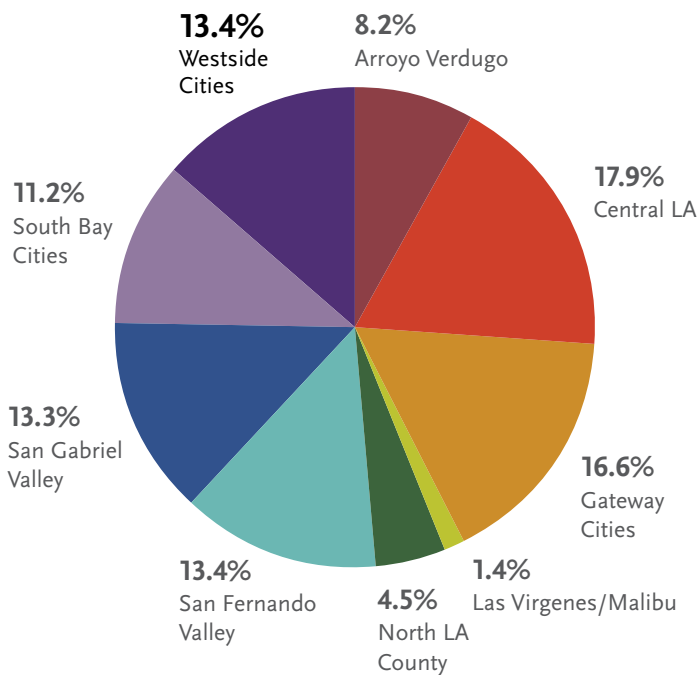
Total Area 111 Square Miles, Rank 8th  
(Out of 9 Subregions)



Total Population 653,289 People, Rank 7th



Total Employment 593,697 Jobs, Rank 4th



Median Household Income \$93,182 Average MHI, Rank 4th





# Glossary

**511** – The National Traveler Information phone number that provides local freeway, transit, rideshare, airport, general emergency, and other traveler related services. 511 ensures that our region complies with this requirement of the federal SAFETEA-LU authorization program.

**ACTIVE TRANSPORTATION** – Refers to any non-motorized mode of travel such as walking, biking, and rolling. The objective is to improve mobility options, enhance quality of life, improve health and safety, and enable better access to goods and services.

**ADA AMERICANS WITH DISABILITIES ACT** – Federal civil rights legislation for disabled persons passed in 1990. It mandates that public transit systems make their services more fully accessible to the disabled. If persons with disabilities are not capable of accessing general public transit service, the law requires agencies to fund and provide for delivery of paratransit services which are capable of accommodating these individuals.

**AQMD AIR QUALITY MANAGEMENT DISTRICT** – Governmental agency established to monitor air quality within a region and to implement state and federal air quality standards through the development of regional air quality plans and regulations.

**ARTERIAL STREET** – A major thoroughfare, used primarily for through traffic rather than for access to abutting land, that is characterized by high-vehicular capacity and continuity of movement. The street is either divided or undivided and its main function is to carry non-local traffic at medium speeds.

**AUTONOMOUS VEHICLE** – A vehicle in which vehicle operation occurs without direct human driver input to control key functions such as steering, acceleration, and braking. There are various degrees of autonomy, but future systems will be principally designed so that the vehicle's passenger is not required to monitor the roadway or intervene in the operation of the vehicles in any way.

**AUXILIARY LANE** – The portion of the roadway adjoining the traveled way for speed change, turning, weaving, truck climbing, maneuvering of entering and leaving traffic, and other purposes supplementary to through-traffic movement.

**AVO AVERAGE VEHICLE OCCUPANCY** – The average number of persons occupying a passenger vehicle along a roadway segment, intersection, or area and monitored during a specified time period. For purposes of the California Clean Air Act, passenger vehicles include autos, light-duty trucks, passenger vans, buses, passenger rail vehicles and motorcycles.

**BIF BUSINESS INTERRUPTION FUND** – Metro's Business Interruption Fund (BIF) provides financial assistance to small "mom and pop" businesses directly impacted by transit rail construction through grants to cover certain fixed operating expenses.

**BIKE SHARE PROGRAM** – Metro's Bike Share system makes bikes available 24/7, 365 days a year in Downtown LA, Central LA, North Hollywood and the Westside. Metro Bike Share offers convenient round-the-clock access to a fleet of bicycles for short trips. Metro Bike Share is one of LA Metro's multiple public transportation options for Angelenos and visitors to get around.

**BRT BUS RAPID TRANSIT** – BRT combines the quality of rail transit with the flexibility of buses. It can operate on exclusive transitways, HOV lanes, expressways, or ordinary streets. A BRT system combines Intelligent Transportation Systems (ITS) technology, transit signal priority, rapid and convenient fare collection, enhanced transit stations, and integration with land use policy.

**BSC BUSINESS SOLUTION CENTER** – Metro's Business Solution Center (BSC) provides hands-on business assistance and support services to small businesses.

**BTSP BICYCLE TRANSPORTATION STRATEGIC PLAN** – Plan to enhance bicycling as a viable transportation mode for LA County.

**BUS SPEED IMPROVEMENTS** – Travel times for bus rider can be improved through the use of ITS, all-door boarding, and road design improvements such as bus-only lanes or queue jumps that give buses priority movement.

**BUSWAY** – A street lane which is reserved for the exclusive use of buses, either in a separated right-of-way or on a city street.

**CALTRANS CALIFORNIA DEPARTMENT OF TRANSPORTATION** – Caltrans is the State's Transportation Department responsible for the design, construction, maintenance and operation of the California Highway System, including the Interstate Highway System within the state's boundaries.

**CARPOOL** – Arrangement in which two or more people share the use, cost or both of traveling in privately owned automobiles between fixed points on a regular basis.

**CARPOOL LANE** – A highway or street lane reserved for carpools and other high occupancy vehicles.

**CHP CALIFORNIA HIGHWAY PATROL** – The statewide law enforcement agency responsible for the management and regulation of traffic on Caltrans-designated freeways and highways to achieve safe, lawful and efficient use of the highway system.

**CLIMATE CHANGE** – A shift in global weather patterns resulting in an increase in the variability of temperature, precipitation, and wind in a region over a period of time. Recent studies suggest that emissions from gasoline powered internal combustion engines contribute to global climate warming, with 40% of GHG emissions attributable to transportation.

**CMAQ CONGESTION MITIGATION AND AIR QUALITY IMPROVEMENT PROGRAM** – Federal funds available for either transit or highway projects that contribute significantly to reducing automobile emissions which cause air pollution. Established by the Intermodal Surface Transportation Efficiency Act.

**COMMUTER RAIL** – Fixed-rail public transit system, generally utilizing heavy rail and track and providing service within a region. Metrolink is the commuter rail service in LA County.

**COMPLETE STREETS** – A comprehensive, integrated transportation network with infrastructure and design that allows safe and convenient travel along and across streets for all users, including pedestrians, users and operators of public transit, bicyclists, persons with disabilities, seniors, children, motorists, users of green modes, and movers of commercial goods.

**COMPLETE STREETS POLICY** – Adopted in 2014, Complete Streets is a high level policy direction that helps redefine how transportation agencies approach streets and highways so that the outcome is a transportation system that balances the needs of all users, regardless of age, ability, or mode of transportation.

**CONGESTION PRICING** – Congestion pricing is the concept of charging for the use of a transportation facility, such as a roadway, based on the level of congestion. The greater the level of congestion, usually occurring during morning and evening rush hours, the higher the cost to use the facility. The ultimate goal is to reduce traffic congestion and to dramatically improve equity, mobility, and environmental outcomes.

**CONSTRAINED PLAN** – Constrained Plan means our committed investments are programmed to match our anticipated funding.

**CSP COUNTYWIDE SIGNAL PRIORITY PROGRAM** – The Countywide Signal Priority (CSP) Program is the largest implementation of multi-jurisdictional signal priority in the nation. It established transit signal priority standards and is broadly adopted in LA County.

**DBE DISADVANTAGED BUSINESS ENTERPRISE** – A company is a DBE if it falls under the following general guidelines: the three-year average annual gross receipts are less than \$23.98 million, the personal net worth of each owner is less than \$1.32 million – excluding the equity in his or her primary residence, the company is an independent business, not a subsidiary and it is a for-profit business. Additionally, at least 51% of the company must be owned by one or more individuals that belong to one of the following socially and economically disadvantaged groups: African Americans, Hispanics, Native Americans, Asian Pacific Islanders, Subcontinent Asian Americans and non-minority women.

**DRAYFLEX** – DrayFLEX stands for Drayage, Freight, and Logistics Exchange and it is a technology application that provides freight-specific dynamic travel planning information to improve container movement in and around the Ports of Los Angeles and Long Beach.

**DVBE DISABLED VETERANS BUSINESS ENTERPRISE**

– A company is a DVBE if the business is at least 51% owned by one or more disabled veterans, and if the daily business operations are managed and controlled by one or more disabled veterans

**DYNAMIC PRICING** – A toll collection strategy where tolls are continuously adjusted throughout the day according to traffic conditions to maintain a minimum designated speed.

**ENVIRONMENTAL JUSTICE** – The term stems from a 1994 presidential executive order to promote equity for disadvantaged communities and promote the inclusion of racial and ethnic populations and low-income communities in decision-making. Local and regional transportation agencies must ensure that services and benefits, as well as burdens, are fairly distributed to avoid discrimination.

**EQUITY** – Equity is both an outcome and a process to address racial, socio-economic, and gender disparities, to ensure fair and just access – with respect to where you begin and your capacity to improve from that starting point – to opportunities, including jobs, housing, education, mobility options, and healthier communities. It is achieved when one’s outcomes in life are not predetermined, in a statistical or experiential sense, on their racial, economic, or social identities. It requires community informed and needs-based provision, implementation, and impact of services, programs, and policies that reduce and ultimately prevent disparities.

**EQUITY FOCUS COMMUNITIES (EFCS)** – Communities identified to measure and track future equity impacts from a transportation perspective.

**EQUITY PLATFORM** – Metro’s multi-point platform provides a basis for Metro to actively lead and partner in addressing and overcoming disparities. It is based on an equity framework involving four key objectives: 1) Define & Measure, 2) Listen & Learn, 3) Focus & Deliver, and Train & Grow.

**EXPRESSLANES** – Metro ExpressLanes is a program designed to improve traffic flow and provide enhanced travel options in LA County. Tolls on the ExpressLanes are calculated using Congestion Pricing. Congestion pricing provides an opportunity to sell some of the additional capacity on the ExpressLanes to those willing to pay a toll and maximizes efficiency of the entire freeway.

**FIXED GUIDEWAY** – System of vehicles that can operate only on its own guideway constructed for that purpose (e.g. commuter rail, light rail).

**FLM FIRST/LAST MILE** – An individual trip is understood as the entire journey from origin to destination. Individuals may use a number of modes (types) of transport to complete a journey (walk, drive, ride, or roll).

**FLM FIRST/LAST MILE STRATEGIC PLAN** – The Plan is Metro’s approach for identifying barriers and planning and implementing improvements for the first/last mile portion of an individual trip.

**FSP FREEWAY SERVICE PATROL** – Towing services funded by Metro to remove stalled vehicles from freeway lanes, especially during peak periods. The FSP also assists stranded motorists who may have run out of gas or need to change a tire.

**GCP GREEN CONSTRUCTION POLICY** – Metro’s GCP aims to improve air quality through the implementation of best practices during planning, construction, operations, and procurement activities.

**GHG GREENHOUSE GAS** – Greenhouse gas is any gas including carbon dioxide, methane and ozone, whose absorption of solar radiation is responsible for the greenhouse effect, in which the atmosphere allows incoming sunlight to pass through but absorbs heat radiated back from the earth’s surface. Greenhouse gases act like a heat-trapping blanket in the atmosphere, causing climate change.

**GHGE GREENHOUSE GAS EMISSIONS** – Greenhouse gas emissions are gases that trap heat in the atmosphere. Some greenhouse gases such as carbon dioxide occur naturally and are emitted to the atmosphere through natural processes. Other greenhouse gases (e.g., fluorinated gases) are created and emitted solely through human activities.

**GOODS MOVEMENT STRATEGIC PLAN** – The plan is a strategic framework to guide goods movement-related planning activities, investments, partnerships and decision-making.

**GUIDEWAY** – Facility housing a transit system, either a subway tunnel, at-grade trackway or busway, or aerial structure. Also see Fixed guideway.

**HIGHWAY** – A freeway or expressway which provides limited access for inter-regional or interstate travel or a major arterial which has been designated as part of the state highway system.

**HOT LANE HIGH-OCCUPANCY/TOLL LANE** – A designated carpool lane that motorists driving alone can use if they pay a toll, allowing them to avoid traffic delays in the adjacent regular lanes. Toll-paying drivers and toll-free carpools/vanpools share the lane, increasing the number of total vehicles using the HOV/HOT lane and generating revenues that can be used for transportation improvements.

**HOV HIGH-OCCUPANCY VEHICLE** – Any transportation vehicle carrying more than one person for travel purposes. This may include an automobile, bus, or train.

**HOV LANE HIGH-OCCUPANCY VEHICLE LANE** – A freeway lane reserved for use by vehicles carrying a specified minimum number of passengers, including buses, vanpools, and carpools. Motorcycles and certain alternatively-fueled vehicles are also permitted to use the lanes.

**ICM INTEGRATED CORRIDOR MANAGEMENT** – An ITS strategy to manage the capacity of a corridor utilizing existing and new technologies. ICM involves the close coordination and strategic planning of the multiple agencies and service providers in the area to manage traffic congestion on highways, arterials, and/or transit routes. ICM often enhances the communication between independent systems and provides alternate solutions to moving persons through an impacted area.

**INTERMODAL** – The term “mode” represents one method of transportation, such as automobile, transit, ship, bicycle or walking. Intermodal refers specifically to transportation trips using multiple modes.

**ITS INTELLIGENT TRANSPORTATION SYSTEMS** – Technical innovations that apply communications and information processing to improve the efficiency and safety of ground transportation systems.

**JD JOINT DEVELOPMENT** – As part of the real estate development program, Metro’s JD collaborates with qualified developers to build transit-oriented developments on Metro-owned properties.

**KISS AND RIDE** – kiss and ride is the transfer point or area in which cars can stop briefly to discharge or, less commonly, pick up passengers.

**LACDPW LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS** – The transportation department for the County of Los Angeles.

**LADOT LOS ANGELES DEPARTMENT OF TRANSPORTATION** – The transportation department for the City of Los Angeles.

**LIFE PROGRAM** – The Low-Income Fare is Easy program provides transportation assistance to low-income individuals in LA County. The program offers fare subsidies that may be applied toward the purchase of fare on Metro or any participating agencies.

**LRTP LONG RANGE TRANSPORTATION PLAN** – Metro’s plan to assess future population increases projected for the county and what such increases will mean for future mobility needs. The plan recommends what can be done within anticipated revenues, as well as what could be done if additional revenues became available. The 2009 LRTP is an update to the 2001 Long Range Transportation Plan for future transportation investments in LA County through 2040.

**MAAS MOBILITY AS A SERVICE** – Mobility as a Service (MaaS) is the integration of various forms of transport services into a single mobility service accessible on demand.

**MEASURE M** – A sales tax initiative approved by LA County voters in 2016 titled the Los Angeles County Traffic Improvement Plan. Measure M is a one-half cent sales tax to be used to ease traffic congestion, expand rail/subway/bus; improve jobs/school/airport connections; and create jobs among other goals.

**MEASURE R** – A sales tax initiative approved by LA County voters in 2008. Measure R established a one-half cent sales tax to be used for public transportation purposes, ending in 2039.

**METRO RAIL** – Metro's light rail and subway transit system.

**METRO RAPID** – Metro's Bus service on key transit corridors with several attributes to provide faster bus service including a distinctive look, traffic signal priority and fewer stops.

**METROLINK** – Southern California's regional commuter rail system connecting Los Angeles, Orange, Riverside, San Bernardino, San Diego, and Ventura counties. Service began in October 1992.

**MICRO MOBILITY** – Micromobility refers to the use of electronic scooters and bikes to travel shorter distances around cities, often to or from another mode of transportation (bus, train, or car). Users typically rent such a scooter or bike for a short period of time using an app.

**MICROTRANSIT** – IT-enabled private multi-passenger transportation services that serve passengers using dynamically generated routes, and may expect passengers to make their way to and from common pick-up or drop-off points.

**MOD MOBILITY ON DEMAND** – Mobility on Demand is an innovative, user-focused approach which leverages emerging mobility services, integrated transit networks and operations, real-time data, connected.

**MODE SHARE** – Indicates the share of a transportation mode utilized by people for their transportation trips as compared to other modes and all of a region's transportation trips as a whole.

**MPH MILES PER HOUR** – Speed described as the distance traveled in one hour.

**MSP MULTI-YEAR SUBREGIONAL PROGRAM** – MSP is established under Measure M to provide Measure M programming funding for subregions in LA County based on the MSP guidelines.

#### **MTP MICROTRANSIT PILOT PROJECT** –

Metro's MicroTransit Pilot is an innovative, three-year pilot project that will use professionally trained Metro employees to provide on-demand shared rides in smaller vehicles for short trips in six designated service areas in LA County.

**MULTIMODAL** – A transportation system which employs a combination of modes, such as highway, bus, rail, high occupancy vehicles, bikeway, and pedestrian and demand management systems.

**NAVILENS** – NaviLens is an audio wayfinding technology to assist and aid the autonomy of blind and visually impaired travelers in Union Station.

#### **O&M OPERATIONS AND MAINTENANCE** –

These are the costs associated with the regular running of a transportation facility or service, including labor, vehicle maintenance, operations and overall facility maintenance.

**PARATRANSIT** – Flexible forms of transportation services that are not confined to a fixed route. Paratransit is generally used to provide service for people with disabilities in compliance with the Americans with Disabilities Act of 1990 (ADA).

**PARKING MANAGEMENT** – To support the implementation of a balanced TDM program, parking management is essential in working in tandem in significantly reducing automobile travel by removing free parking at high parking demand and congested destinations.

**PEAK PERIOD** – The period during which the maximum amount of travel occurs. It may be specified as the morning (AM) or afternoon or evening (PM) peak.

**PM PARTICULATE MATTER** – Mixture of extremely small particles and liquid droplets made up of a number of components, including acids, organic chemicals, metals, and soil or dust particles. The size of the particles is directly linked to their potential for causing health problems. Of particular concern are those particles that are ten micrometers in diameter or smaller that can be inhaled into the lungs and potentially cause serious health effects.

**PROP A** – Proposition A is a sales tax initiative approved by the LA County voters in 1980. The proposition established a one-half cent sales tax to be used for public transportation purposes.

**PROP C** – Proposition C is a sales tax initiative approved by the LA County voters in 1990 that established a one half-cent sales tax to be used for public transportation purposes.

**RAMP METERING** – A freeway to which access is controlled by entrance ramp signals that use fixed-time signal settings or is regulated by a computerized surveillance system. This procedure is used to prevent freeway congestion.

**RIDESHARE** – The term generally refers to carpooling and vanpooling.

**RIDESHARING** – Two or more persons traveling by any mode, including but not limited to, automobile, vanpool, bus, taxi, jitney, and public transit.

**RIITS NETWORK REGIONAL INTEGRATION OF INTELLIGENT TRANSPORTATION SYSTEMS** – Metro sponsors the network. Caltrans, LADOT, California Highway Patrol and Metro all contribute information collected through their own Intelligent Transportation Systems. The network supports information exchange in real-time between freeway, traffic, transit and emergency service agencies to improve management of the LA County transportation system and better serve the traveling public.

**RTPA REGIONAL TRANSPORTATION PLANNING AGENCY** – A state-designated agency responsible for preparing the Regional Transportation Plan (RTP) and the Regional Transportation Improvement Program (RTIP), administering state funds, and other regional transportation planning tasks.

**SB 1** – Signed into law on April 28, 2017, new revenues focus on road safety improvements, repair local streets, expand public transit, improve highways, build bridges and overpasses. Also provides \$5.4 billion per year over the next decade to fund transportation improvements.

**SB 1 SGR STATE OF GOOD REPAIR** – These funds are available for eligible transit maintenance, rehabilitation, and capital projects and are based on a distribution formula using State Transit Assistance Funds (STA).

**SBE SMALL BUSINESS ENTERPRISE** – A company is an SBE if it falls under the following general guidelines: the three-year average annual gross receipts are less than \$23.98 million, the personal net worth of each owner is less than \$1.32 million – excluding the equity in his or her primary residence, the company is an independent business, not a subsidiary and it is a for-profit business.

**SCAG SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS** – SCAG is the federally-designated Metropolitan Planning Organization (MPO) for six counties (Los Angeles, Orange, San Bernardino, Riverside, Ventura and Imperial). It is the regional agency responsible for developing a regional transportation plan for the six-county region.

**SCAQMD SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT** – A regional agency which adopts and enforces regulations to achieve and maintain state and federal air quality standards. It is responsible for preparing the Air Quality Management Plan (AQMP) for the South Coast Air Basin. Also known as the AQMD.

**SCRRA SOUTHERN CALIFORNIA REGIONAL RAIL AUTHORITY** – The five county regional joint powers authority responsible for the operation of the Metrolink commuter train service.

**SHOPP STATE HIGHWAY OPERATIONS AND PROTECTION PROGRAM** – The state funding category used by Caltrans to maintain and operate state highways.

**SRTP SHORT RANGE TRANSPORTATION PLAN** – The 2014 Short Range Transportation Plan focuses on the phasing of transportation improvements through 2024 and relies on performance-based modeling to identify the best solution for each mobility challenge.



**SIGNAL SYNCHRONIZATION** – Traffic signal

synchronization refers to the functioning relationship between active signals along a corridor. A common cycle length is established for all intersections in the coordinated system. By maintaining a constant relationship between the signals at all times, there is a greater likelihood that mobility will be improved. This does not mean that the signals will provide a green light at the same time for the entire length of a corridor; rather, that each signal will quite literally be synchronized with the entire system, allowing for more efficient mobility.

**SMART GROWTH** – A set of policies and programs designed to protect, preserve and economically stimulate established communities while protecting valuable natural and cultural resources and limiting sprawl.

**SOUNDWALL** – Noise control walls and barriers built between highways and nearby homes that can reduce noise levels by 10-15 decibels.

**SOV SINGLE-OCCUPANT VEHICLE** – A vehicle with only one occupant. Also known as a “drive alone.”

**SUBREGIONS** – The nine geographic subregions of LA County include Arroyo Verdugo, Central Los Angeles, Gateway Cities, Las Virgenes/Malibu, North Los Angeles County, San Fernando Valley, San Gabriel Valley, South Bay Cities and Westside Cities.

**SUSTAINABILITY** – A manner to meet the needs of the present generation without compromising the ability of future generations to meet their own needs.

**TAM TRANSIT ASSET MANAGEMENT** – A business model that uses the condition of assets to guide the optimal prioritization of funding at transit properties in order to keep transit networks in a State of Good Repair.

**TAP TRANSIT ACCESS PASS** – Transit pass, a plastic card with an embedded smart card chip, is designed to apply fare payments at fareboxes, ticket vending machines, and other participating agencies.

**TDM TRANSPORTATION DEMAND MANAGEMENT**

– Involves various strategies aimed at increasing the efficient use of transportation systems. The benefits focus on reducing single occupancy vehicles, road and parking congestion, pollution reduction, and increasing transit ridership, and more efficient land use.

**TNC TRANSPORTATION NETWORK COMPANY**

– Transportation Network Companies provide prearranged transportation services for compensation using an online-enabled application or platform (such as smart phone apps) to connect drivers using their personal vehicles with passengers.

**TOC TRANSIT ORIENTED COMMUNITIES** –

TOCs include land use planning and community development policies that maximize access to transit as a key organizing principle and acknowledge mobility as an integral part of the urban fabric.

**TOC POLICY** – In June 2018, the Metro Board adopted the TOC Policy in an ambitious effort to formalize Metro’s commitment to partner with the 88 cities and unincorporated areas in LA County to support “TOC activities.”

**TOD TRANSIT ORIENTED DEVELOPMENT** – A type of development that links land use and transit facilities to support the transit system and help reduce sprawl, traffic congestion and air pollution. It calls for locating housing, along with complementary public uses (jobs, retail and services) at strategic points along a transit line.

**TRANSITWAY** – A transportation corridor dedicated for exclusive or preferential use by public transit vehicles, including rail vehicles, buses, carpools and vanpools.

**TRANSPORTATION INFRASTRUCTURE** – Transportation infrastructure generally refers to the built transportation system including highways, bridges, railways, ports, and transit facilities. Infrastructure for “transit” systems includes the fixed components of the transit system, such as rights-of-way, buses and rail vehicles, tracks, signal equipment, stations, park-and-ride lots, bus stops and maintenance facilities.

**TSM TRANSPORTATION SYSTEM MANAGEMENT**

– That part of the urban transportation planning process undertaken to improve the efficiency of the existing transportation system by better managing the system. The intent is to make better use of the existing transportation system by using short-term, low-capital transportation improvements that generally cost less and can be implemented more quickly than major capital projects.

**U-PASS THE UNIVERSAL COLLEGE STUDENT**

**TRANSIT PASS** – The U-Pass provides college students of participating schools with greater fare discounts and an expedited activation process that is administered directly on campus.

**VANPOOL** – A vanpool is a group of five to 15 commuters who regularly travel together to work in a comfortable van, minivan, or SUV, at least three days per week.

**VEHICLE OCCUPANCY** – The number of people aboard a vehicle at a given time; also known as auto or automobile occupancy when the reference is to automobile travel only.

**VEHICLE TRIP** – A one-way movement of a vehicle between two points.

**VMT VEHICLE-MILES TRAVELED** – The number of miles that vehicles are driven over a certain time period (usually a day or a year). VMT are key data for highway planning and management, and a common measure of roadway use. This data allows analysts to estimate on-road vehicle fuel consumption, congestion, air quality, and potential gas-tax revenues.

**VSH VEHICLE SERVICE HOURS** – The total hours of revenue service operated by transit service vehicles. This does not include deadhead hours.

**WIN-LA WORKFORCE INITIATIVE NOW IN**

**LOS ANGELES** – WIN-LA is Metro's workforce development program created to focus on careers in the transportation industry.

**ZERO EMISSIONS** – Refers to a type of engine or energy source that emits no waste products that pollute the environment and does not contribute to climate change.

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**Attachment C - LRTP Public Comment Reponse Matrix**

Agencies and Organizations

Org	#	Comment Received	Response
Gateway Cities Council of Govts	146	<u>Page 6</u> – The discussions on changing mobility needs should include the changing state of the commute and trends away from eight-to-five commutes. Also, there should be an examination on the future of telecommuting and whether the work-from-home trend will remain in some form that will impact mobility.	The LRTP was developed prior to the onset of the COVID-19 pandemic. The LRTP will include a new discussion of the COVID-19 pandemic and the variety of impacts it has on the contents of the LRTP, including the impacts on Metro's financials, operations, and other efforts. The LRTP is the 30-year plan for Los Angeles County. The near-term strategies and actions are to be determined and will be documented in the Short-Range Transportation Plan (SRTP). The LRTP is a living document that will be amended as necessary as the county's priorities change and as financial, technological, or demographic changes warrant updates to the plan. The LRTP will include a new discussion of the COVID-19 pandemic and the variety of impacts it has on the contents of the LRTP. The new financial realities facing LA Metro will be explored extensively over the next several years and will be documented in the SRTP.
	147	<u>Page 8</u> – The monotone maps are ineffective when less than the full page.	The map style and map contents were reviewed prior to the adoption of the LRTP. We will share this comment with the appropriate project and design teams.
	148	<u>Page 9</u> – The addition of general purpose lanes can be a workable solution that is not disruptive or expensive.	This will be addressed in the final LRTP prior to adoption.
	149	<u>Page 11-13</u> – Does this plan assume that all of the Measure R & M priorities are built and the expanded programs such as ExpressLanes and active transportation networks make the capital program successful? Some of the strategies are going to be difficult to implement such as VMT pricing and may work against equity factors by placing an undue burden on the working poor.	The bold policies outlined in the recommended LRTP are subject to change and will require additional studies to determine the full cost to implement and maintain. The bold policies outlined in the LRTP cannot be achieved alone. They will require partnerships with local and regional stakeholders, as well as buy-in from elected officials and the general public. The full assumptions included in the LRTP analysis are included in the LRTP Technical Document; however, the implementation of any given bold policy or program will require additional analysis to understand the full impacts.
	150	<u>Page 14</u> – Sustainability was a major concern in 2009, is it still a priority or has it been incorporated into other concerns such as reduced congestion?	Sustainability is still a major priority in this LRTP; however, it is now a guiding principle as opposed to a priority area. Metro believes that environmental sustainability, like equity, should carry through to each strategy and action. Additionally, several specific sustainability actions are detailed under the Better Transit, Less Congestion, and Complete Streets priority areas.
	151	<u>Page 20</u> – It would be helpful to have an appendix with project descriptions. "Strategy 1.1d. Identify and Plan Future Metro rail expansion," point of clarification: Does this refer to projects in the latter years of the Measure M plan, or are these meant to be projects that have yet to be defined?	This is addressed in the LRTP Technical Document.
	152	<u>Page 24</u> – "Strategy 1.4: Enhanced Station Area." Are these recommendations something that will be included in the station area design or will it be an add-on the cities are responsible for? Will there be funding and opportunities to retrofit other older lines?	This is not directly addressed in the LRTP. We will forward your question on to the appropriate department at Metro.
	153	<u>Page 25</u> – "Strategy 1.6: Enhance Customer Experience." Protection and cleaning for COVID-19 should be a stated strategy. Clean comfortable and safe has taken on new meaning.	The LRTP was developed prior to the onset of the COVID-19 pandemic. The LRTP will include a new discussion of the COVID-19 pandemic and the variety of impacts it has on the contents of the LRTP, including the impacts on Metro's financials, operations, and other efforts. The LRTP is the 30-year plan for Los Angeles County. The near-term strategies and actions are to be determined and will be documented in the Short-Range Transportation Plan (SRTP). The LRTP is a living document that will be amended as necessary as the county's priorities change and as financial, technological, or demographic changes warrant updates to the plan. The LRTP will include a new discussion of the COVID-19 pandemic and the variety of impacts it has on the contents of the LRTP. The new financial realities facing LA Metro will be explored extensively over the next several years and will be documented in the SRTP.
	154	<u>Page 32</u> – Caltrans should be identified as the owner/operator of the highway system to set context. Additionally, there should be mention of the subsidies for lower-income ExpressLane users.	This will be addressed in the final LRTP prior to adoption.
	155	<u>Page 34</u> – An appendix explaining how project costs were calculated would be helpful.	The LRTP Technical Document will include details on project costs and financial model assumptions
	156	<u>Page 37</u> – "Strategy 2.1: Implement operational improvements with technology." There should be mention of advanced freight ITS to improve truck flow and safety.	This will be addressed in the final LRTP prior to adoption.
	157	<u>Page 38</u> – "Strategy 2.4: Minimize impact of roadway incidents." Expansion of the Freeway Service Patrol should include the expansion of big rig tow service on major truck impacted freeways in the Gateway Cities, North County and San Gabriel Valley.	This will be addressed in the final LRTP prior to adoption.
	158	<u>Page 38</u> – "Strategy 2.5: Support Efficient Goods Movement." This goal should be rewritten to read "support efficient and sustainable goods movement." Goods movement projects and the LA County Goods Movement Strategy must emphasize air quality improvement, safety and freight efficiency. The description of the goods movement plan is good but the environmental emphasis is not in the state strategy.	This will be addressed in the final LRTP prior to adoption.
	159	<u>Page 40</u> – "Strategy 2.7: Enhance the operation of the state highway system." The word "safety" should be inserted in this strategy; capacity improvement and safety need to be joined.	This will be addressed in the final LRTP prior to adoption.
	160	<u>Page 46</u> – There should be a discussion of the local and subregional efforts and complete streets efforts going on through the county in addition to the major bikeway initiatives.	This will be addressed in the final LRTP prior to adoption.
	161	<u>Page 48</u> – "Strategy 3.3: Establish active transportation improvements as integral elements of the transportation system." Add a strategy to implement First/Last Mile active transportation projects to all new, planned and under-construction rail lines.	We believe this element is addressed appropriately elsewhere in the LRTP.
162	<u>Page 50</u> – "Strategy 3.4: Maintain a state of good repair on roadways." This requires clarification as it is slightly confusing with the Caltrans SHOPP program. Combining and coordination of projects makes sense.	We believe this element is addressed appropriately elsewhere in the LRTP.	

**Attachment C - LRTP Public Comment Reponse Matrix**

Agencies and Organizations

Org	#	Comment Received	Response
	163	<u>"Strategy 3.6: Reduce regional GHG and criteria air pollutant emissions" A strategy to partner with local agencies would be appropriate.</u>	This will be addressed in the final LRTP prior to adoption.
	164	<u>Page 51 – It is great to see the Zero-Emission Truck Initiative called out. This narrative should mention the Draft LA County Goods Movement Strategic Plan. Is the plan for Goods Movement Strategic Plan to be incorporated into the LRTP at some point?</u>	The Goods Movement Strategic Plan is linked specifically in action 2.5a and called out on page 39.
	165	<u>Page 58 – "Transit Oriented Communities (TOC)." There should be specific strategies in this section for how the MTA plans to work with jurisdictions on creating communities that are supportive of transit and other mobility options.</u>	Metro is committed to addressing working with local partners to address the housing shortages facing our region. Through our Joint Development Program on Metro-owned land, and through our Transit Oriented Communities program, we'll seek to create new housing around transit and will encourage transit-supportive land use policy.
	166	<u>Page 60 – "Strategy 4.1: Advance equity through institutional transformation to eliminate disparities." It is not clear how these strategies, when applied, will impact the allocation of resources.</u>	
	167	<u>"Strategy 4.2: Build affordable housing near transit." This strategy does not completely reflect the partnerships that must be developed, as the MTA can only develop affordable housing on agency-owned property</u>	Metro is committed to addressing working with local partners to address the housing shortages facing our region. Through our Joint Development Program on Metro-owned land, and through our Transit Oriented Communities program, we'll seek to create new housing around transit and will encourage transit-supportive land use policy.
CalTrans, District 7	214	The LRTP seems to separate the modes of travel (transit, highways, active transportation). Need to have actions that integrate the modes.	This will be addressed in the final LRTP prior to adoption.
	215	Has the COVID-19 pandemic required that any of the content in this draft version of Metro's Long Range Transportation Plan be updated/revise?	The LRTP was developed prior to the onset of the COVID-19 pandemic. The LRTP will include a new discussion of the COVID-19 pandemic and the variety of impacts it has on the contents of the LRTP, including the impacts on Metro's financials, operations, and other efforts. The LRTP is the 30-year plan for Los Angeles County. The near-term strategies and actions are to be determined and will be documented in the Short-Range Transportation Plan (SRTP).
	216	How would the LRTP be altered or affected with new guidelines/procedures surrounding the Covid-19, if this pandemic continues or future safety standards are changed?	This is not directly addressed in the LRTP. We will forward your question on to the appropriate department at Metro.
	217	How incidents will be managed throughout the County to mitigate congestion?	
	218	LRTP does not seem to address incentives for Clean Air Vehicles to reduce Green House Gas emissions from the Transportation System.	This will be addressed in the final LRTP prior to adoption.
	219	Metro could increase/improve at site information/directions so new riders would have the knowledge on how to navigate/guide between the different rails and bus service system. Electronic displays at the rail stations updating arrival and departure times along with correlating the regional bus service (bus route arrival/departure times) would be helpful to the patrons.	Metro is committed to building a World Class Bus system. Improvements planned for the system include those to enhance the customer experience, improve the system operations, and to provide reliable access to riders where and when they need to travel. We recognize that the transit system has lost ridership over the last several years and are committed to improving our bus service. Through our NextGen Bus Plan, Metro is redesigning our entire bus network and these changes will be implemented over the next 18 months. Working with local partners, Metro is exploring projects to improve bus speed and reliability in congested corridors. Additional efforts to improve customer experience, including safety and security, are underway as well.
	221	Previous reports have mentioned that the number of rail patrons have decreased, has Metro conducted a study to why the decrease of ridership and is there a correlation with paying for parking in the park and ride lots? This additional expensive may not be cost effective to public transit users.	The decline in ridership has been more acute on the bus system, though certain rail lines have also lost ridership. While the causes are numerous and complex, parking costs are not likely to be the primary factor.
	222	A color coded map of existing and future rail ways and their connections would provide a clear picture of existing and future systems. For example existing rail systems could be color coded as red and future systems to be green, etc is recommended.	The map style and map contents were reviewed prior to the adoption of the LRTP. We will share this comment with the appropriate project and design teams.
	223	It is recommend for the LRTP to include an improved interconnected network that would permeate throughout the cities surrounding the existing rail line to increase ridership. Also to develop a seamless connection in the urban transit network. It would be helpful if the LRTP included the existing bus service system onto the presented maps.	Metro's transit capital expansion program includes the most aggressive expansion of light rail and heavy rail in the country. We are committed to bringing high quality transit to as many residents as possible; however, we realize that we cannot have rail stations and rail lines everywhere. Metro is working to provide first and last mile connectivity to our rail stations and, working with our partners, to offer high quality bus service where we do not have rail. Furthermore, the final station locations and alignments of the rail lines included in the LRTP are subject to change during the environmental planning phases of the project development.
	224	Does Metro provide personnel on site in case of an emergency for the riders, to guide them to their alternate routes?	There are Metro staff and security at stations but not all the time. Metro's COVID recovery task force is recommending a new Customer Ambassadors program to help the relaunch of the system during and after the pandemic
	225	Has Metro considered the connection between the Gold, Green and Blue Lines in the north south direction by light rail? This is a vast region of commuters that do not have the opportunity of using light rail on the east side of L.A. County.	Metro's transit capital expansion program includes the most aggressive expansion of light rail and heavy rail in the country. We are committed to bringing high quality transit to as many residents as possible; however, we realize that we cannot have rail stations and rail lines everywhere. Metro is working to provide first and last mile connectivity to our rail stations and, working with our partners, to offer high quality bus service where we do not have rail. Furthermore, the final station locations and alignments of the rail lines included in the LRTP are subject to change during the environmental planning phases of the project development.

**Attachment C - LRTP Public Comment Reponse Matrix**

Agencies and Organizations

Org	#	Comment Received	Response
	226	The LRTP could consider a rail system that connects the northern LA County to the southern portions of LA.	Metro's transit capital expansion program includes the most aggressive expansion of light rail and heavy rail in the country. We are committed to bringing high quality transit to as many residents as possible; however, we realize that we cannot have rail stations and rail lines everywhere. Metro is working to provide first and last mile connectivity to our rail stations and, working with our partners, to offer high quality bus service where we do not have rail. Furthermore, the final station locations and alignments of the rail lines included in the LRTP are subject to change during the environmental planning phases of the project development.
	227	With the effects of the current Covid-19 pandemic, more people are teleworking. Metro needs to focus on expanding intercity bus/rails rather than eliminating the existing HOV lanes. Therefore, a moratorium should be put on any HOV to Express Lane conversion.	Building out the ExpressLane network is a priority for Metro. However, each conversion of HOV lanes to ExpressLanes requires careful planning and studies to determine the impact and the estimated benefits. During the planning phases, each project will be assessed for financial viability given the transportation and financial realities of that time. The specific design considerations, including access and egress, as well as the financial and equity concerns will be addressed during the planning phases.
	228	A concern with the LRTP is the idea of converting HOV lanes to Express Lanes. According to the report, the conversion to EL's is considered a congestion mitigative strategy through congestion pricing. The congestion on both the 10 and 110, has experienced degraded conditions since conversion. The State of Virginia on I-95 is an example of an increase of SOV usage rather than carpools that increases vehicle volumes (the toll lane started with 1 converted HOV lane and now has increased to 3 toll lanes), increases air pollution and decreases the AVO's. LA does not have the room to build extra toll lanes to accomodate SOV's.	Building out the ExpressLane network is a priority for Metro. However, each conversion of HOV lanes to ExpressLanes requires careful planning and studies to determine the impact and the estimated benefits. During the planning phases, each project will be assessed for financial viability given the transportation and financial realities of that time. The specific design considerations, including access and egress, as well as the financial and equity concerns will be addressed during the planning phases.
	229	no mention of homelessness in the county.	In spring 2016, at the direction of our CEO, Metro created a Homeless Task Force to address homelessness in and around the transit system and align action with County and City of Los Angeles priorities. In February 2017, the Homeless Action Plan was finalized. The Action Plan's goals are threefold: 1. to enhance the customer experience; 2. maintain a safe and secure system; and, 3. connect homeless persons in the transit system to services and resources under Measures H and HHH. Metro continues to expand efforts in this area.
	230	no mention of plans to sanitize facilities and vehicles regularly to combat virus spread.	The LRTP was developed prior to the onset of the COVID-19 pandemic. The LRTP will include a new discussion of the COVID-19 pandemic and the variety of impacts it has on the contents of the LRTP, including the impacts on Metro's financials, operations, and other efforts. The LRTP is the 30-year plan for Los Angeles County. The near-term strategies and actions are to be determined and will be documented in the Short-Range Transportation Plan (SRTP). The LRTP is a living document that will be amended as necessary as the county's priorities change and as financial, technological, or demographic changes warrant updates to the plan. The LRTP will include a new discussion of the COVID-19 pandemic and the variety of impacts it has on the contents of the LRTP. The new financial realities facing LA Metro will be explored extensively over the next several years and will be documented in the SRTP.
	231	no mention of public art and beautification of facilities.	This will be addressed in the final LRTP prior to adoption.
	232	no mention of police/security policies to ensure accountability.	In March of 2017, Metro Transit Security entered into a five-year contract with three police agencies to further support security on bus and rail lines across Metro's transit system. That same year, Metro launched the use of a multi-agency approach to patrol LA County's 88 cities. This new policing structure includes the Los Angeles County Sheriff's Department, Los Angeles City Police Department, and Long Beach Police Department. Our partnership increases the "felt presence" of officers riding our buses and trains to deter crime and give riders and employees more assurance that they can ride the system safely. Metro remains committed to retaining the confidence of its transit customers, who depend on a safe, secure transit system for their daily transportation needs.
	233	Projects listed in the LRTP need to be consistent with project listed in SCAG RTP (scope, opening year, cost, etc.)	We are reviewing all project details, including the available funding, the project cost, and the opening year in advance of the adoption of the LRTP. We will share this comment with the appropriate project team.
	234	Two comments: 1. Is the employment number under 2020 (4.4 million) in the context of COVID, or is it a "pre-COVID" number? 2. The year identified for Seaports Cargo is 2018. Would it be possible to provide data for the year 2019 instead?	The LRTP was developed prior to the onset of the COVID-19 pandemic. The LRTP will include a new discussion of the COVID-19 pandemic and the variety of impacts it has on the contents of the LRTP, including the impacts on Metro's financials, operations, and other efforts. The LRTP is the 30-year plan for Los Angeles County. The near-term strategies and actions are to be determined and will be documented in the Short-Range Transportation Plan (SRTP). The LRTP is a living document that will be amended as necessary as the county's priorities change and as financial, technological, or demographic changes warrant updates to the plan. The LRTP will include a new discussion of the COVID-19 pandemic and the variety of impacts it has on the contents of the LRTP. The new financial realities facing LA Metro will be explored extensively over the next several years and will be documented in the SRTP.
	235	Suggest clarifying "largest county in the US" by referencing population: "largest county population in the US."	This will be addressed in the final LRTP prior to adoption.
	236	In paragraph under "A Growing County" header. Are the referenced "congested corridors" only in the context of highways and roads or do the congested corridors also include the context of passenger and freight rail systems? If both, suggest including reference to both, if only highways and roads, suggest adding that additional specificity.	This will be addressed in the final LRTP prior to adoption.



**Attachment C - L RTP Public Comment Reponse Matrix**

Agencies and Organizations

Org	#	Comment Received	Response
	237	missing freeways on maps (like SR 2)	The map style and map contents were reviewed prior to the adoption of the L RTP. We will share this comment with the appropriate project and design teams.
	238	Over the next decade, Metro plans to introduce an additional 210 miles of ExpressLanes on four additional corridors.	Comment noted.
	239	Under Figure 5--Benefits of the 2020 L RTP, would it be possible to add a graphic showing improvements (reductions) in auto VMT?	We believe this element is addressed appropriately elsewhere in the L RTP.
	240	Figure 5, Benefits of the 2020 L RTP: How certain are these stipulated benefit figures? What happens if they are not realized?	The bold policies outlined in the recommended L RTP are subject to change and will require additional studies to determine the full cost to implement and maintain. The bold policies outlined in the L RTP cannot be achieved alone. They will require partnerships with local and regional stakeholders, as well as buy-in from elected officials and the general public. The full assumptions included in the L RTP analysis are included in the L RTP Technical Document; however, the implementation of any given bold policy or program will require additional analysis to understand the full impacts.
	241	Regarding, "3. Road Charges (Mileage-based / VMT fees)," is this for travel on all roads in LA County? Who would be managing this "Road Charge" program? What is the source of the information indicating that, "each one cent per mile increase can result in roughly a 1% increase in transit ridership?"	The bold policies outlined in the recommended L RTP are subject to change and will require additional studies to determine the full cost to implement and maintain. The bold policies outlined in the L RTP cannot be achieved alone. They will require partnerships with local and regional stakeholders, as well as buy-in from elected officials and the general public. The full assumptions included in the L RTP analysis are included in the L RTP Technical Document; however, the implementation of any given bold policy or program will require additional analysis to understand the full impacts.
	242	What is the Transit Homeless Action Plan 2.0?	This is not directly addressed in the L RTP. We will forward your question on to the appropriate department at Metro.
	243	Regarding the lower photo on page 27, which is understood to correspond to =, "Strategy 1.8: Optimize sustainable and resilient operations and maintenance of fleet, infrastructure and facilities," it is suggested that the existing photo be replaced with one showing a battery electric bus.	Comment noted.
	244	In the last sentence of the first text block on this page, it is suggested to add the word "integrated" to "corridor management," unless the use of "corridor management" in this instance is meant to convey something else, in which case it would be suggested to add "and integrated corridor management." Metro also works with local agencies to implement smaller scale improvements such as arterial widenings, intersection upgrades, ramp metering, traffic signal synchronization, corridor management and intelligent transportation system (ITS) solutions.	This will be addressed in the final L RTP prior to adoption.
	245	Figure 13: 71 Gap closure HOV Lanes not identified on the map	The map style and map contents were reviewed prior to the adoption of the L RTP. We will share this comment with the appropriate project and design teams.
	246	Figure 14, "Major Highway Projects," includes: Alameda Corridor East Grade Separations Phase II , Sepulveda Pass Transit Corridor (Ph 1), Countywide Sound wall Construction. Does "Major Highway Projects" include projects that are not on the state highway system. If so, it is suggested to add a footnote to provide an explanation.	We are reviewing all project details, including the available funding, the project cost, and the opening year in advance of the adoption of the L RTP. We will share this comment with the appropriate project team.
	247	Are the "Open Year" identified for the I-710 South Corridor Project (Ph 1), 2040, and for the I-710 South Corridor Project (Ph 2), 2041, correct?	We are reviewing all project details, including the available funding, the project cost, and the opening year in advance of the adoption of the L RTP. We will share this comment with the appropriate project team.
	248	Figure 14 Project Limits, Cost, and Opening Year Corrections SR-71 Gap from I-10 to 0.2 miles south of the Los Angeles/San Bernardino County Line 413 2026 I-105 ExpressLanes from I-405 to I-605 762* 2025 *If Alt 3 is selected or \$475M for Alt 2 I-5 North Capacity Enhancements (SR-14 to Lake Hughes Rd) 679 (ok) 2026 High Desert Multi-Purpose Corridor (HDMC) 393 (10 Billion in 2016 \$'s)** 2034 I-5 Capacity Enhancement (I-605 to Orange County Line) \$1,468 YR 2022 I-5 North Carpool Lanes – SR-134 to SR-118 \$920 YR 2022 SR-91 bundle of projects excluded from list I-5/I-605 Interchange Improvement Project and I-605 CIP are excluded from the list in Figure 14. Clarity is needed on 710 South Phases 1 and 2	We are reviewing all project details, including the available funding, the project cost, and the opening year in advance of the adoption of the L RTP. We will share this comment with the appropriate project team.
	249	Figure 15. It is suggested that either all of the projects listed in Figure 14 be numbered--and the number be included with the label of the project in Figure 15, or that the text of the labels in Figure 15 be verbatim what was used for the project for it's listing in Figure 14.	The map style and map contents were reviewed prior to the adoption of the L RTP. We will share this comment with the appropriate project and design teams.
	250	It is suggested that the existent text at the bottom of Figure 15 be revised to: "For projects that have not yet completed the environmental process, final alignments will be defined during completion of the environmental process for the respective projects."	Comment noted.
	251	It is noted that the list of actions under Strategy 2.1: Implement operational improvements with technology does not include the ICM project being developed for I-710. Additionally, technology focused pilot programs, such as Drayflex, are not listed. Are pilot programs not being identified because they are pilot programs? NOTES: It is noted that the associated discussion on page 37 also include no reference to the I-710 ICM, or any technology-focused pilot programs. It is also noted that "Strategy 2.5: Support efficient goods movement," includes no discussion on either of these as well.	This will be addressed in the final L RTP prior to adoption.
	252	Strategy 2.2 - Traveler Information needs to be across modes. A highway traveler needs to know real time transit options. All modes, including pedestrian, need to be aware of closures and detours.	This will be addressed in the final L RTP prior to adoption.

**Attachment C - LRTP Public Comment Reponse Matrix**

Agencies and Organizations

Org	#	Comment Received	Response
	253	Strategy 2.3 - Direct access to staging areas (transit centers, park and ride lots) is needed from the managed lane network. El Monte and Harbor Gateway are two examples of this direct access. There are other opportunities throughout the network.	Building out the ExpressLane network is a priority for Metro. However, each conversion of HOV lanes to ExpressLanes requires careful planning and studies to determine the impact and the estimated benefits. During the planning phases, each project will be assessed for financial viability given the transportation and financial realities of that time. The specific design considerations, including access and egress, as well as the financial and equity concerns will be addressed during the planning phases.
	254	Strategy 2.3 - Carpoolers do not travel in Express Lanes completely free, unlike existing HOV lanes. This is because individual users must purchase stored value on a transponder and rent the transponder for a monthly maintenance fee currently assessed by Metro. If two or three individuals decide to carpool together, two transponders must be purchased/ rented, which means monthly fees are collected twice (or more). Consider removing the monthly maintenance fee (like MTC/ Bay Area Fasstrak) or allowing usage without transponder (SANDAG I-15 Express Lanes) when the minimum number of occupants to designate HOV are present (and using a transponder for those vehicles below minimum HOV occupancy). Equity may be of concern since potential users may lack access to banking (credit card or checking) accounts, or may not have proper documentation or permanent mailing address to open an account to use Express Lanes.	Building out the ExpressLane network is a priority for Metro. However, each conversion of HOV lanes to ExpressLanes requires careful planning and studies to determine the impact and the estimated benefits. During the planning phases, each project will be assessed for financial viability given the transportation and financial realities of that time. The specific design considerations, including access and egress, as well as the financial and equity concerns will be addressed during the planning phases.
	255	Express Lanes section states: "The I-110 and I-10 ExpressLanes have saved commuters, on average, six minutes during peak morning commutes" - this amount of time saving does not seem very significant given the Capital Investment on Express Lanes Conversion and the toll amount the users have to pay. The statement brings into question effectiveness of the Express Lanes.	Building out the ExpressLane network is a priority for Metro. However, each conversion of HOV lanes to ExpressLanes requires careful planning and studies to determine the impact and the estimated benefits. During the planning phases, each project will be assessed for financial viability given the transportation and financial realities of that time. The specific design considerations, including access and egress, as well as the financial and equity concerns will be addressed during the planning phases.
	256	Express Lanes section states "according to surveys, 81% of ExpressLanes users would likely support the expansion of ExpressLanes on other freeways" - misrepresents (violators) are approximately 30% during peak period and more than 50% during peak hours. How accurately this survey result will mimic the reality?	Building out the ExpressLane network is a priority for Metro. However, each conversion of HOV lanes to ExpressLanes requires careful planning and studies to determine the impact and the estimated benefits. During the planning phases, each project will be assessed for financial viability given the transportation and financial realities of that time. The specific design considerations, including access and egress, as well as the financial and equity concerns will be addressed during the planning phases.
	257	Is the referenced "Traffic Reduction Study" only going to focus on local roads? If so, it is suggested that that clarification be included, at minimum in the related discussion on page 39.	This is not directly addressed in the LRTP. We will forward your question on to the appropriate department at Metro.
	258	Strategy 2.5b - Curbside mobility is across modes. Freight deliveries need the curbside as do transit stops, rideshare services, and local residences and businesses. In addition, curbside mobility affects active transportation. Improvements should be done in partnership with regional and local agencies.	This will be addressed in the final LRTP prior to adoption.
	259	It is suggested that the text under Strategy 2.5: Support efficient goods movement: LA County's extensive transportation network serves as the backbone to the nation's freight transportation system. The LA County Goods Movement Strategic Plan, under development with stakeholders across the county, will develop a comprehensive approach that balances various goals, including efficient and effective flow of goods to support economic sustainability and prosperity," include language specifically emphasizing social equity."	This will be addressed in the final LRTP prior to adoption.
	260	The discussion under the Goods Movement Strategic Plan specifically references the seaports, but does not reference LAX, intermodal facilities or logistic warehouses.	This will be addressed in the final LRTP prior to adoption.
	261	Propose revising the text immediately under Strategy 2.7: Enhance the operation of the state highway system to, "Metro continues to address key bottlenecks in LA County, some of the most congested in the US. Metro works with Caltrans and regional partners to plan, build and maintain projects that address highway capacity and operational efficiency."	This will be addressed in the final LRTP prior to adoption.
	262	Propose revising Action 2.7.a to, "Work with Caltrans and local agencies in conjunction with development and construction of projects which directly address freeway bottlenecks."	This will be addressed in the final LRTP prior to adoption.
	263	Strategy 2.7b - In addition to the state highway and local arterial roadway network, the transit network should also be included to alleviate traffic congestion.	Comment noted.
	264	An observation. The discussion and accompanying data on page 43 would seem to indicate that commuting by car is faster than mass transit, and it is only showing for the AM commute. Would it be possible to distinguish between SOV's, HOV's, and Express Lanes, in comparison to express bus and rail (heavy/light)? And if this is possible, could the data be shown for both the AM and PM commutes?	This is addressed in the LRTP Technical Document.
	265	Could the source of the "definition" of Complete Streets be included?	Comment noted.
	266	Strategy 3.3 - There needs to be an action here related to eliminating barriers to pedestrians and bicyclist. This could go under safety, but it is also an equity issue. Examples are getting from one side of a freeway, rail line, river, etc. to the other side in a safe, efficient manner.	This will be addressed in the final LRTP prior to adoption.
	267	Although Metro's identified Complete Streets Policy includes a specific reference to, "...movers of commercial goods." there is no discussion with this focus in this section. As a suggestion, perhaps a discussion could be added, focusing on 2.5b. Develop curbside mobility improvements in partnership with regional agencies, incorporating any applicable content from the "LA County Goods Movement Strategic Plan."	We believe this element is addressed appropriately elsewhere in the LRTP.
	268	If the discussion provided under Our plan helps reduce emissions, for a healthier LA. Is not going to include PM2.5, it is recommended that the text under this heading specifically reference PM10 as the figure does.	Comment noted.
	269	Although the narrative on the preceding page indicates that, "...Metro has defined "Equity Focus Communities" (EFCs)." it is recommended that a source (or sources) be identified for Figure 22.	This will be addressed in the final LRTP prior to adoption.

**Attachment C - LRTP Public Comment Reponse Matrix**

Agencies and Organizations

Org	#	Comment Received	Response
	270	If it is public information, would it be possible to identify a dollar range with respect to the various "Affordable housing units/apartments" identified? Or perhaps the source for the determination of the quantity of "Affordable housing units/apartments" at each of the locations.	This is not directly addressed in the LRTP. We will forward your question on to the appropriate department at Metro.
	271	Metro 2018 Equity Effort: What was the outcome of this effort? Has it been effective?	Addressing historical inequities is a guiding principle for the LRTP and a core tenet for Metro's current planning activities. Metro's Equity Platform will help guide future planning studies and investment decisions.
	272	Strategy 4.3 - Consider opening discounts to more than just LA County residents; there are riders of all ages who use LA Metro who do not reside in LA County and therefore do not qualify for residency discounts. Youths/ school-age children and seniors/ disabled residing outside LA County traveling to destinations in LA County pay full fare since they cannot qualify for reduced fares. Consider allowing Ticket Vending Machines and vehicle operators to add reduced fare rides/ passes to any TAP card (and request verification upon boarding/ fare check) as qualifying transit riders may be undocumented (or otherwise lack proper/ accepted ID), more transient (without a permanent mailing address) or otherwise not reside in LA County. Such measures would reduce household expenses for those who choose or depend on public transportation.	Metro is conducting a Comprehensive Pricing Study. The study goals are revenue, ridership, equity, security, and customer experience-, and will be considered against deliverability within the context of the near and long-term agency recovery from the COVID-19 pandemic.
	273	Equity should also look at mobility access to the same stop, platform or station as able-bodied individuals. Requiring mobility-impaired transit riders (or those with wheeled devices) to travel an extra block or so to access a rail platform or underground station isn't nearly as equal when such platforms or stations have multiple entrances on different streets that able-bodied individuals (without wheeled devices) can access. Although some bicyclists and scooter users may be able to carry their	Addressing historical inequities is a guiding principle for the LRTP and a core tenet for Metro's current planning activities. Metro's Equity Platform will help guide future planning studies and investment decisions.
	274	Be aware of the post COVID-19 impact.	Thank you for the comment. Metro is committed to providing safe and accessible services for all users. The LRTP was developed prior to the onset of the COVID-19 pandemic. The LRTP will include a new discussion of the COVID-19 pandemic and the variety of impacts it has on the contents of the LRTP, including the impacts on Metro's financials, operations, and other efforts. The LRTP is the 30-year plan for Los Angeles County. The near-term strategies and actions are to be determined and will be documented in the Short-Range Transportation Plan (SRTP). The LRTP is a living document that will be amended as necessary as the county's priorities change and as financial, technological, or demographic changes warrant updates to the plan. The LRTP will include a new discussion of the COVID-19 pandemic and the variety of impacts it has on the contents of the LRTP. The new financial realities facing LA Metro will be explored extensively over the next several years and will be documented in the SRTP.
	275	no citing of source for the 1.84 million jobs figure.	This is addressed in the LRTP Technical Document.
	276	Could a brief discussion be provided regarding the "Goods Movement \$0.1 billions" as shown in Figure 28, comparable perhaps to the discussions provided on page 70 for "Access Services" and "Roadway Operations."	This is addressed in the LRTP Technical Document.
	277	Although Metro is one of, and provides a substantial and growing operating subsidy for Metrolink commuter rail, it is not enough to maintain service levels that existed years ago. Prior to COVID-19, the Metrolink San Bernardino Line saw substantial service reductions in 2014 during mid-day and late evening periods. Mid day trains that previously ran every 30-60 minutes now have 60-120 minute headways, and late evening outbound trains (after 9:30pm) were eliminated for Monday-Thursday. These service cuts that have yet to be restored place an undue burden for workers in certain industries (such as service and hospitality) who do not commute during conventional peak hours.	The LRTP's investment plan is built upon previous efforts and the Metro Board's previous directives. The Measure M expenditure plan was developed with significant public input and was passed by over 70% of LA County voters, and much of the funding allocated for projects and programs included in the LRTP was written into the Measure M statute. It is important for Metro to support all modes while emphasizing our commitment to transit and sustainable transportation options; however, there will be additional opportunities to influence future investment decisions. Local jurisdictions receive funding in the form of "Local Return" and most subregions receive funding through "Multi-year Subregional Programs", which can be used for a variety of project types. Metro encourages stakeholders to provide your feedback directly to local and regional governments as well as to Metro on future planning efforts. The Short Range Transportation Plan, to be completed following the LRTP, will re-evaluate the financial realities facing LA County over the next decade and will provide an opportunity for Metro and our partners to examine the prioritization of funding.

**Attachment C - L RTP Public Comment Reponse Matrix**

Agencies and Organizations

Org	#	Comment Received	Response
South Bay Cities Council of Govts	278	There are at least three significant dynamics that will change the quantity and quality of Metro’s transit market, all predicted or predictable, which have not been accounted for in the draft L RTP. (1 of 3):A. Technology: Electronic access is decreasing the need for the physical proximity that drives demand for mobility. The L RTP is based on an assumption that mobility networks and systems will return to the “old normal” after the virus has passed. That would require a return to business as usual. It seems more likely, or at least more prudent, to plan for the case where transactions are completed virtually rather than in physical spaces. This is especially true regarding work sites where telework has in many firms taken hold, in part because of employee preferences. Several technology businesses have declared that telework will become a permanent option, and close to home, the County of Los Angeles is making a broad range of worksite options available to its large work force. New technology for collaboration and virtual presence has made the adjustment to COVID-19 feasible. Zoom, WebEx, and MS Teams, while not brand new, have become popular options available to facilitate remote work and a range of remote services including working from home (WFH), virtual government, telemedicine and online education. These technologies and others are certain to develop in the next few years, and to become permanent common options for work early in the next 30 years. Microsoft has already introduced its “Together Mode” to help the brain more effectively process meetings with many attendees shown on the screen. Imagine in the near future voice-activated ad hoc Zoom meetings with multiple participants. Proximity, while desired for many circumstances, will no longer be required except for a few interactions, with special approvals needed for nonessential travel.	The L RTP is intended to be both bold and realistic. It recognizes that there will be changes in technologies and other challenges and uncertainties that face the region. The L RTP is a living document that will be amended as necessary as the county's priorities change and as financial, technological, or demographic changes warrant updates to the plan.
	279	There are at least three significant dynamics that will change the quantity and quality of Metro’s transit market, all predicted or predictable, which have not been accounted for in the draft L RTP. (2 of 3):Environment: Climatologists have predicted with a high degree of confidence that extreme heat will affect life in all of Southern California long before 2050. The L RTP should include language that recognizes the phenomenon and include specific recommendations and budgets for transit service adaptations. The adaptations could include consideration of significantly increased investments needed for better air circulation systems in buses, on the rail platforms and train cars to ensure protection from future health concerns for both riders and operators. Without protection from the heat, few people will be willing to wait outside 20 minutes in extreme heat.	Sustainability is a guiding principle in this L RTP and a foundational element of our activities. Metro believes that environmental sustainability should carry through to each project, program, and policy. The L RTP details several specific strategies to address sustainability and our new report that will be published soon, Moving Beyond Sustainability, provides greater detail on how Metro will lead in sustainability.
	280	New modes: The emerging micromobility phenomenon could easily grow to capture a sizable segment of the short range trip, five miles or less which already characterizes 70 to 75% of all trips today. (3 of 3):Automated vehicles in the form of “robocabs” should begin to appear in commercial service no later than 2025 with full scale deployment in many markets by 2035. Robocabs are essentially driverless robots that deliver door-to-door, no-transfer, on-demand service at rates lower than existing network transportation service. How much lower will be understood better in the next few years as more is learned about the higher capital expense per vehicle and lower operational expenses. The L RTP should include a strategy for the market segment in which public transit can compete. For example, its most effective niche might be rapid, long haul, low cost service.	The L RTP is intended to be both bold and realistic. It recognizes that there will be changes in technologies and other challenges and uncertainties that face the region. The L RTP is a living document that will be amended as necessary as the county's priorities change and as financial, technological, or demographic changes warrant updates to the plan.
	281	Covid-19 may have dramatically and permanently changed Metro’s potential transit market share. The new paradigm of working from home (WFH) may continue to significantly exceed transit as it has in recent years especially as employers seek to improve their profitability by reducing their office expenses. Technologies such as virtual meetings and shared work software enable a new model for a significant share of the workforce that may reduce congestion, especially if WFH is integrated with transportation demand management (TDM). The L RTP should more extensively address the potential long-term effects of WFH as a distinct mode and not refer to it as just another TDM strategy.	This will be addressed in the final L RTP prior to adoption.
	282	Metro staff has estimated it will need to charge 20-cents per mile in a Vehicle Miles Traveled congestion reduction fee to help fund an 81% growth in transit mode share from the pre-COVID 19 rate (a mode share change from 7% to 14%) over the next 30 years. This growth rate assumes that the current COVID 19 ridership levels are not relevant to L RTP assumptions and ridership will return to prior levels over the next two years which is an overly optimistic assumption even within the industry. The L RTP assumes Faster Transit strategies will grow ridership by 7%, reduced/free fares will add 25% and VMT Fees will add another 18%. The balance will come from future travel trends and compound effects, and Measure M. We disagree with the projection’s assumption that pre-COVID riders will return as Safer At Home restrictions are lifted. Metro assumes the pandemic will not have permanent ridership impacts. Therefore, Metro has chosen to consider COVID 19 as a short-term	The bold policies outlined in the recommended L RTP are subject to change and will require additional studies to determine the full cost to implement and maintain. The bold policies outlined in the L RTP cannot be achieved alone. They will require partnerships with local and regional stakeholders, as well as buy-in from elected officials and the general public. The full assumptions included in the L RTP analysis are included in the L RTP Technical Document; however, the implementation of any given bold policy or program will require additional analysis to understand the full impacts. More information on the assumptions of the plan, including the financial model, project-specific assumptions, and the L RTP performance evaluation are included in the L RTP Technical Document.
283	On page 61, the report states, “Metro is considering free transit for students, and if additional revenue is raised through congestion pricing, Metro could subsidize transit for all riders.” The language needs to be updated to reflect the recent Board direction on student and other fare discounts. Clarification is needed regarding the financial cost (including increased capital and operations costs) of providing free/subsidized fares from VMT fees and the financial assumptions for any other transit strategies that will be funded with VMT fees.	Comprehensive fare study	

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Agencies and Organizations

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	284	4. On page 66, the report states, "While the expanded programs, partnerships, and policies of the 2020 L RTP represent additional expenditures, these will be balanced by future revenues anticipated through future policies, such as ExpressLanes and congestion pricing." It is impossible to confirm this statement from the narrative in the L RTP. A chart is needed that clearly describes the sources, uses, and amounts for each of the funding sources.	The bold policies outlined in the recommended L RTP are subject to change and will require additional studies to determine the full cost to implement and maintain. The bold policies outlined in the L RTP cannot be achieved alone. They will require partnerships with local and regional stakeholders, as well as buy-in from elected officials and the general public. The full assumptions included in the L RTP analysis are included in the L RTP Technical Document; however, the implementation of any given bold policy or program will require additional analysis to understand the full impacts.
	285	5. The L RTP needs to provide more detail on the capital, operating and maintenance cost of achieving a 14% transit mode share which would likely double Metro and municipal transit operator costs. Metro should also be transparent in its projected farebox recovery assumptions and the other funding mechanisms assumed in its goal to increase annual transit trips per capita by 81% over the next three decades.	The bold policies outlined in the recommended L RTP are subject to change and will require additional studies to determine the full cost to implement and maintain. The bold policies outlined in the L RTP cannot be achieved alone. They will require partnerships with local and regional stakeholders, as well as buy-in from elected officials and the general public. The full assumptions included in the L RTP analysis are included in the L RTP Technical Document; however, the implementation of any given bold policy or program will require additional analysis to understand the full impacts.
	286	Page 20 - In the Better Transit section, the Metro Rail Expansion paragraph on near-term projects includes the West Santa Ana Branch, but does not include the Green Line Extension to Torrance which is in its environmental clearance process. Please correct the omission or eliminate the narrative reference to specific projects and refer readers to the complete list on the following page.	This will be addressed in the final L RTP prior to adoption.
	287	Page 28 - In the More Transit Trips Mean More Opportunity page, please add a column in each chart for the current daily transit trips and transit mode share for commute trips. Also add a chart for transit mode share for daily trips. It is important to distinguish between commute and daily mode shares in order not to understate the relative size of the non-transit daily and commute trip mobility challenge which exceeds 85% of the congestion problem.	More information on the assumptions of the plan, including the financial model, project-specific assumptions, and the L RTP performance evaluation are included in the L RTP Technical Document.
	288	Spending \$160 billion to increase the transit mode share from 7% to 14% may not be the most cost-effective way to reduce congestion compared to strategies that eliminate trips. Metro is not just a transit agency, it is a mobility manager. The L RTP does not provide sufficient attention to trip elimination which has the potential to reduce travel far more than 14%. Please evaluate the cost benefit of the wide range of trip reduction strategies that do not rely on a mode shift but simply eliminate the need for the trip.	The L RTP recognizes that TDM is an important strategy for managing congestion and addressing environmental goals. We will continue to be a regional leader in TDM and look forward to collaborating with our local partners to manage demand, reduce the number of SOV trips, and provide new transportation options. Additionally, Metro recognizes that telecommuting has grown steadily over the past decade and that COVID-19 has dramatically accelerated that trend. We will continue to support and analyze this trend.
	289	Page 34 – A portion of the I-405 South Bay Improvements are scheduled for completion before the 2028 Olympics, but the Major Highway Projects shows the project opening in 2047. There should be a Phase I and Phase II with the appropriate cost and Open Year. The I-110 ExpressLane extension should not wait until 2046 to open. The extension should be the first priority for surplus revenues generated from the existing I-110 ExpressLane, before these funds are committed to other new ExpressLane projects such as the I-105 ExpressLane which is slated to open in 2025.	We are reviewing all project details, including the available funding, the project cost, and the opening year in advance of the adoption of the L RTP. We will share this comment with the appropriate project team.
	290	Page 67 – The pie chart shows that \$66.8 billion (17%) of the \$400 billion in the L RTP will come from "Other Local" sources. Please list the sources and amounts assumed and the proportion assigned to capital vs operations.	
	291	Page 74 – Although the L RTP is financially constrained over its 30-year term, there is no transparency as to funding constraints by decade. Metro regularly updates its financial forecasts with decade-by-decade transparency, but these financial constraints are not shown in the L RTP. Instead project opening dates are used. As a result, short- and long-term consequences of financial challenges such as COVID 19 are not explicitly addressed in the L RTP and make the issue of financial constraint hard to assess. How will the upcoming SRTP be constrained consistent with the L RTP decennial budgets and schedules assumed in the L RTP? Will the SRTP provide more transparency on the first decade funding available per the L RTP and its underlying financial assumptions and allocations? The L RTP includes projected costs for major transit and highway projects. But the document also includes dozens of programs that are described without the cost of individual program / project / policy / strategies being identified. The L RTP should provide a summary table of the costs for each of the four major initiatives beyond the major projects.	The L RTP is the 30-year plan for Los Angeles County. The near-term strategies and actions are to be determined and will be documented in the Short-Range Transportation Plan (SRTP). The L RTP is a living document that will be amended as necessary as the county's priorities change and as financial, technological, or demographic changes warrant updates to the plan. The new financial realities facing LA Metro will be explored extensively over the next several years and will be documented in the SRTP. The L RTP includes a new discussion of the COVID-19 pandemic and the variety of impacts it has on the contents of the L RTP.
	292	Finally, the Next Gen Bus Study is referenced several times in the L RTP with numerous embedded strategies and actions. The L RTP projects a 13% reduction in traffic delay once the recommendations are implemented. The key goals of the Next Gen study are to ensure that: transit service is: 1. accessible to nearly all potential riders and serves 2020 destinations; 2. improves travel speeds by dedicating bus-only lanes on streets; 3. provides transit priority at signalized intersections, and reduces the number of local stops. The study states that with these strategies, Metro hopes to make a transit trip take no more than 2.5 times the time a comparable trip takes in a vehicle. We do not understand how much these strategies will cost or how a 2.5X travel time delta would attract a projected 7% increase in transit ridership.	More information on the assumptions of the plan, including the financial model, project-specific assumptions, and the L RTP performance evaluation are included in the L RTP Technical Document.

**Attachment C - L RTP Public Comment Reponse Matrix**

**Agencies and Organizations**

Org	#	Comment Received	Response
	293	The innovation in the L RTP appears to be largely driven by new transit projects, policies and pricing strategies but it does not address the way travel, technology, work and commutes are changing. Traditional public transit has been declining for over 10 years in Los Angeles County, pre-COVID – and we are concerned that this L RTP focuses too much on business as usual.	The L RTP is the 30-year plan for Los Angeles County. The near-term strategies and actions are to be determined and will be documented in the Short-Range Transportation Plan (SRTP). The L RTP is a living document that will be amended as necessary as the county's priorities change and as financial, technological, or demographic changes warrant updates to the plan. The new financial realities facing LA Metro will be explored extensively over the next several years and will be documented in the SRTP. The L RTP includes a new discussion of the COVID-19 pandemic and the variety of impacts it has on the contents of the L RTP.
Metrolink	294	<p>The Southern California Regional Rail Authority (SCRRA) has reviewed the draft Metro Long Range Transportation Plan (L RTP). Overall, SCRRA supports the L RTP and its focus on clearly articulated transit objectives, mobility and access goals and community improvement plans. The L RTP carries great potential to provide a high-quality transportation system to meet growing needs in LA County. As the operator of the regional commuter rail system known as Metrolink, SCRRA has a shared responsibility to increase mobility across LA County and beyond by seeking out opportunities to enhance connectivity and smoother first/last mile journeys for riders. We appreciate the Metro acknowledges the value of Metrolink through Strategy 1.1 of the L RTP. We encourage Metro to further leverage these investments with a focus on enhancing connectivity to the greatest extent possible. One way to do so is by incorporating Metrolink stations into the strategies to connect jobs and housing and strengthen communities through the Transit Oriented Communities program. As Metro expands and improves the rail transit network, we request that Metro prioritize coordination with Metrolink on corridor projects that can potentially affect Metrolink rail lines, such as the: • North San Fernando Valley Transit Corridor • North Hollywood to Pasadena Transit Corridor • East San Fernando Valley Light Rail Project • Gold Line Foothill Extension to Claremont • Eastside Extension Phase 2 Trans Corridor (1st and 2nd Alignment) Metrolink regional rail service allows people to live where they want and still work in the jobs-rich areas of LA County and the greater Southern California region.</p> <p>While doing so, Metrolink removed 9.3 million car trips from Southern California roadways in Fiscal Year 2019. Investment in Metrolink represents a simultaneous investment in economic opportunity and traffic reduction. As a result, The Metrolink system should be incorporated as part of multimodal corridors for consideration for investment and cohesive management in strategies to advance the Traffic Reduction Study (Strategies 2.6b and 2.6c, p. 38). Additionally, the L RTP should identify the elimination the State of Good Repair backlog on the Antelope Valley Line as a priority. Metrolink shares approximately 60% of its regional rail network with freight operators servicing the ports of Los Angeles and Long Beach. Accordingly, as Metro invests in multi-modal freight improvement options in Strategy 2.5a and 2.5c (p. 38), benefits to Los Angeles County's passenger rail system should be incorporated into project definition, performance evaluation, and investment decisions in recognition of the multifaceted joint benefits to the system. Thank you for the opportunity to comment on L RTP. We look forward to our continued partnership with Metro on this important project, as well as our shared priorities in the region.</p>	Thank you for your comments. Metro is committed to working with Metrolink on our shared priorities. In the L RTP, the support for Metrolink projects is referenced in the Better Transit priority area; however, that is not to suggest that Metrolink is not an important partner on other strategies and actions. We look forward to continued collaboration on projects and programs of mutual benefit.
North County Transportation Coalition	295	Oh Those Metro Maps. Seeking equitable funding for north Los Angeles County mobility projects has not been the only challenge—inclusion on the Metro “maps” has been just as formidable. NCTC Subregion elected officials, public officials, Executive Director, civic, and business leaders routinely go to Metro meetings to receive handouts and maps that do not depict north Los Angeles County—either excluded from an insert table or occasionally, nonexistent on the map. The NCTC Subregion in north Los Angeles County must continually strive to be on the “map,” for example: •None of the maps show SR138 connecting the I-5 to the SR14. •SR138 is on most maps but is usually covered with the map legend. •June 7, 2019 Draft L RTP Board Report and Baseline Understanding Appendix, pg.84, Metro ranks NCTC Subregion #1 Total Area Subregion, but leaves SR126 and SR138 off the map. The Metro Draft L RTP illustrations need to depict the north Los Angeles County subregion properly.	This will be addressed in the final L RTP prior to adoption.



**Attachment C - L RTP Public Comment Reponse Matrix**

Agencies and Organizations

Org	#	Comment Received	Response
	296	<p>Metro Investment with NCTC Subregion Gets Funding and Transit Ridership Results The sentiment that transportation funding was not equitable for the NCTC Subregion, led the NCTC Board of Directors to ask for a Funding Analysis and Snapshot report. The report complied with the assistance of Metro Countywide Planning and Development and the NCTC staff members is in final development. The NCTC Subregion draft funding analysis details formula and discretionary funding to the region from FY2018-24. The draft analysis shows that for transportation discretionary grants, the NCTC region is doing exceptionally well. When the NCTC Subregion partners with Metro and Metrolink seeking discretionary federal and state grants, we have a near 100% success rate. That is not a typo, \$401 million in three recent federal and state grant examples:•I-5 North Capacity Enhancement Project received a total of \$294 million in grants, including private sector funding obtained by the Subregion:•Federal \$47 million INFRA grant and •CA State \$247 million TECP grant. •AVL Service Improvements received \$107 million TIRCP grant award matched with 53% of NCTC Measure M MSP Subregional funds (\$116.3M).In July 2019, the Metro AVL Study had jaw dropping results for north Los Angeles County:•AVL Ridership Steadily Increasing—since July 2015. •29% Ridership Growth on the AVL July 2015 to July 2019 •Metro initiated the \$5.5 million investment in the Ridership Fare Reduction Program—AVL ridership has grown 29% as of June 2019. The program is so successful that even after Metro lowered the fare reduction investment to \$2 million in July 2018, ridership has continued to steadily increase. •AVL HAS SEEN INCREASED RIDERSHIP IN LOS ANGELES COUNTY. •AVL achieves over 11% transit mode split for trips generated in the Antelope Valley and nearly 10% for trips generated in the Santa Clarita Valley. •AVL Service Improvement Scenarios for frequent, clock-based transit to/from Lancaster to/from LA Union Station in less than 90 minutes is achievable for \$698.1 million.</p>	<p>We are reviewing all project details, including the available funding, the project cost, and the opening year in advance of the adoption of the L RTP. We will share this comment with the appropriate project team.</p>
	297	<p>Following the Northridge Earthquake in 1994, total trip time on Metrolink rail service to/from the Antelope and Santa Clarita Valley’s has seen little improvement. The AVL Study clearly demonstrated that with modest investment—\$698.1million—Metrolink service can provide the frequent transit trip to compete with the car trip on the freeway. (Metro AVL Study Metro Report, July 17,2019 Metro Planning &amp; Programming Committee).In this Draft L RTP period, the NCTC Subregion realistically sought the \$220m Metrolink Antelope Valley Line Capital and Service Improvements Project scenario option with NCTC allocating 53%, \$116.3M in Measure M matching funds used to achieve the TIRCP \$107 million grant award. The \$220m AVL capital improvement project entering environmental clearance will provide a real rail alternative to the freeway trip—for the \$698.1 million AVL project, the NCTC Subregion must wait for the next 30-year plan. Metro partnering with the NCTC Subregion to seek funding opportunities produces results, returning federal and state tax dollars to the LA region’s transportation projects as the north Los Angeles County residents respond by using the viable transit alternative provided.</p>	<p>We are reviewing all project details, including the available funding, the project cost, and the opening year in advance of the adoption of the L RTP. We will share this comment with the appropriate project team.</p>
	298	<p>Freeways Can Not Be Forgotten The Draft L RTP provides a Snapshot of the North Los Angeles County NCTC Subregion transportation network (Baseline June 2019 L RTP Metro Report pages 85/86). Major Transportation FacilitiesArea freeways include the Golden State Freeway (I-5) and the Antelope Valley Freeway (SR-14). State Route SR-126 and SR-138 also impact the region. Metrolink operates commuter rail services with stations located in the cities of Lancaster, Palmdale, Santa Clarita, and in unincorporated areas of Los Angeles County. For the NCTC Subregion funds in the L RTP programmed to highways and arterials is imperative. Los Angeles County relies on the freeway network to move people and goods. Is 26% highway funding for the entire Los Angeles County sufficient over a 30-year period? The NCTC Subregion has limited viable alternatives to the freeway network. The main connection for the Antelope Valley and Santa Clarita Valley to the LA Basin and beyond is the freeway system with limited regional rail connections through Metrolink. The Metrolink AVL is the only true mobility option that does not use the freeway system. Even Santa Clarita Transit and Antelope Valley Transit Authority (AVTA) use the freeway system for their transit service between the Valley’s and into the LA Basin.Metro asks the NCTC Subregion to be patient for the regional rail alternative transit option, while spending less on the freeway system—NCTC has concerns with this long-term transportation planning approach for the north Los Angeles region.</p>	<p>The L RTP’s investment plan is built upon previous efforts and the Metro Board’s previous directives. The Measure M expenditure plan was developed with significant public input and was passed by over 70% of LA County voters, and much of the funding allocated for projects and programs included in the L RTP was written into the Measure M statute. Metro must balance environmental sustainability and equity imperatives with the realism that our roadway transportation system is still crucially important for regional mobility.</p>
	299	<p>The Draft L RTP has the expansion of the Express Lanes Strategic Network, i.e. tolling/congestion pricing proposal, for the entire County by 2045. (Page 33, Figure 13, Tier 3 Draft L RTP). The NCTC JPA has not taken a formal position on the Metro Express Lanes Strategic Network expansion—but a majority of the NCTC Board has publicly expressed serious concerns with the Metro congestion pricing/toll lanes proposal and how it adversely impacts north Los Angeles County residents and businesses, especially those in the Equity Focus Communities (EFC). Ironic, the best map in the Draft L RTP depicting the NCTC Subregion seeks additional congestion pricing.</p>	<p>Metro is exploring road pricing as an option for reducing congestion, while at the same time providing alternatives to driving. Our Traffic Reduction Study is currently studying several pricing mechanisms and complimentary mobility improvement in select candidate corridors; however, the specifics of the recommendations stemming from the study are unknown at the moment.</p>

**Attachment C - LRTP Public Comment Reponse Matrix**

Agencies and Organizations

Org	#	Comment Received	Response
	300	The NCTC Subregion believes more funds should be spent in the Draft LRTP for life-saving highway projects like the SR14 and SR138. At every NCTC JPA Board meeting, the NCTC receives public testimony from Neenach, Antelope Acres, and Oso Town Councilmembers on the NW SR 138 Corridor with powerful visuals of fatal accidents as they urge Caltrans, Metro and NCTC to approve roughly \$90 million in safety related fixes detailed in the Metro approved EIR connecting the I-5 to the SR14 along the SR138 corridor. (Metro Northwest SR138 certified EIR, 2017) Metro and Caltrans staff have heard the northwest SR138 corridor public comment and have sought traffic calming, signage, and other measures, but concerning the safety related expansion projects including passing lanes, the NCTC Subregion is told to be patient, Metro and Caltrans do not have the funding for these freeways/highway projects. The freeway/highway arterial network is part of the NCTC Subregion transit system. For many north Los Angeles County residents, transit options have many transfers, take numerous hours, and are not available 24/7 to match their work schedules. As the Metro Board seeks to Reimagine The Highway System, please acknowledge that the NCTC Subregion needs to improve chokepoints along the SR 14 and SR 138 which are above the CA allowable accident rate according to Caltrans (Caltrans SR14 Traffic Safety and Operational Analysis, July 2019). May 14, 2020 Tweet by Transportation Policy Director to a Metro Board Member: "Those who stand to be the most impacted by the policy or program should hold the most power in the decision-making space, but they rarely do" by Ms. Ariel Ward, A Tale of Two Truths: Transportation and Nuance in the Time of COVID-19, May 13, 2019 www.medium.com Transportation professionals need to make space for critical questions even when—or especially when—it's inconvenient. May 14, 2020 Tweet by Transportation Policy Director to a Metro Board Member	The LRTP's investment plan is built upon previous efforts and the Metro Board's previous directives. The Measure M expenditure plan was developed with significant public input and was passed by over 70% of LA County voters, and much of the funding allocated for projects and programs included in the LRTP was written into the Measure M statute. It is important for Metro to support all modes while emphasizing our commitment to transit and sustainable transportation options; however, there will be additional opportunities to influence future investment decisions. Local jurisdictions receive funding in the form of "Local Return" and most subregions receive funding through "Multi-year Subregional Programs", which can be used for a variety of project types. Metro encourages stakeholders to provide your feedback directly to local and regional governments as well as to Metro on future planning efforts. The Short Range Transportation Plan, to be completed following the LRTP, will re-evaluate the financial realities facing LA County over the next decade and will provide an opportunity for Metro and our partners to examine the prioritization of funding.
	301	Demographics in North Los Angeles County The recent Covid Pandemic highlights how all of Los Angeles County relies on the NCTC Subregions first responders and essential workers—on 24/7 shifts throughout Los Angeles County. We appreciate and are proud of our north Los Angeles County neighbors for the work they have done during the pandemic to provide essential services to keep us healthy, safe, and secure, while stocked with essential goods. Thank You! It is understandable that city, civic and business leaders are reticent to headline Equity Focus Communities (EFC) in economic development brochures touting the benefits of their city, but US Census Bureau statistics, Metro demographic maps tell the story—NCTC Subregion needs Equity: One in three in the Antelope Valley live in Equity Focus Communities—yet Lancaster and Palmdale appear to have no projects listed in the Draft LRTP. Black/African American population: Lancaster 21.8%, Palmdale 12.5% Asian population: Santa Clarita 11% Hispanic or Latino: Lancaster 39.7%, Palmdale 60.2%, Santa Clarita 33.5% Persons in Poverty: Lancaster 23.8%, Palmdale 17.3%, Santa Clarita 8.6% School Free/Reduced Lunch Program, Lancaster K-6 eligible: 75% Veterans average population in AV & SCV is 6.1%, above LA County 3.5% & CA 5.4% avg. Veterans average population: Lancaster 7.5%, Palmdale 5.8%, Santa Clarita 4.9% Persons without Health Insurance, under age 65: Lancaster 7.5%, Palmdale 10%, Santa Clarita 7.5% Persons 65 years and over: Lancaster 9.8%, Palmdale 18.9%, Santa Clarita 11.3% NCTC Subregion officials need Metro assistance to connect with the impacted Equity Focus Communities in the Antelope and Santa Clarita Valley's.	The LRTP is a regional plan for mobility throughout LA County. The project prioritization process included as part of Measure M compared the benefits of highway and transit projects relative to each other. This comparison included systemwide impacts; network impacts and benefits to other areas beyond the project's scope were included in the prioritization process. However, providing benefits to each subregion within LA County is an important goal for Metro. Therefore, overall project performance and subregional equity are balanced in the LRTP's investment plan. The Short Range Transportation Plan, to be completed following the LRTP, will re-evaluate the financial realities facing LA County over the next decade and will provide an opportunity for Metro and our partners to examine the prioritization of funding.
	302	Lancaster and Palmdale have Equity Focus Communities (EFC), but no projects appear to be listed in the Draft LRTP.	Addressing historical inequities is a guiding principle for the LRTP and a core tenet for Metro's current planning activities. Metro's Equity Platform will help guide future planning studies and investment decisions.
	303	Figure 14, only North County project shows I-5 from 14 to Lake Hughes, should be to Parker Road.	We are reviewing all project details, including the available funding, the project cost, and the opening year in advance of the adoption of the LRTP. We will share this comment with the appropriate project team.
	304	Figure 15, I-5 improvements, should be moved from planned to build since fully funded.	We are reviewing all project details, including the available funding, the project cost, and the opening year in advance of the adoption of the LRTP. We will share this comment with the appropriate project team.
	305	Figure 26, when combine all the bus and rail categories, 57% of the funding going towards these categories versus 26% for highways/multimodal projects	The LRTP's investment plan is built upon previous efforts and the Metro Board's previous directives. The Measure M expenditure plan was developed with significant public input and was passed by over 70% of LA County voters, and much of the funding allocated for projects and programs included in the LRTP was written into the Measure M statute. Metro must balance environmental sustainability and equity imperatives with the realism that our roadway transportation system is still crucially important for regional mobility.
	306	Plan states that complete streets and Active Transportation will come out of roadway money	More information on the assumptions of the plan, including the financial model, project-specific assumptions, and the LRTP performance evaluation are included in the LRTP Technical Document.
	307	Page 70, SHOPP funding estimate LA County, how is the \$22B derived and doesn't Caltrans allocate the SHOPP Program? The NCTC Subregion has successfully worked with Metro and Caltrans to allocate SHOPP funds to the I-5, SR14, SR138, and SR 126.	More information on the assumptions of the plan, including the financial model, project-specific assumptions, and the LRTP performance evaluation are included in the LRTP Technical Document.
	308	Metrolink and Goods Movement very limited discussion. In fact, no projects listed.	We believe this element is addressed appropriately elsewhere in the LRTP.
	309	The Draft does not depict the Subregional list of projects, rather that is listed in a separate Baseline Report from June 2019.	This is addressed in the LRTP Technical Document.

**Attachment C - LRTP Public Comment Reponse Matrix**

**Agencies and Organizations**

Org	#	Comment Received	Response
	310	- No mention of the Metro Call For Projects Program.	This is addressed in the LRTP Technical Document.
	311	- Highway Program—Can the SR14 and SR138 access Rural highway grant funds? Why do those rural corridors compete with urban I-5, I-405, I-10, etc. corridors for funds?	This is not directly addressed in the LRTP. We will forward your question on to the appropriate department at Metro.
	312	- June 7, 2019 Draft LRTP Board Report and Baseline Understanding Appendix, page 84, Metro ranks the NCTC Subregion #1 Total Area Subregion, but there is NO SR126 or SR138 on the NCTC specific map shown. Page 86, states Palmdale is largest City in North County—should clarify this for land area? Population would be Santa Clarita largest.	This is addressed in the LRTP Technical Document.
	313	- Will the Subregional Section with maps/descriptions be in the Final LRTP?	This is addressed in the LRTP Technical Document.
	314	- Will there be a Strategic Unconstrained Funding Section?	This will be addressed in the final LRTP prior to adoption.
	315	- No maps show SR138 connecting the I-5 to the SR14.	The map style and map contents were reviewed prior to the adoption of the LRTP. We will share this comment with the appropriate project and design teams.
	316	- SR138 on most maps, but usually covered with the map legend.	The map style and map contents were reviewed prior to the adoption of the LRTP. We will share this comment with the appropriate project and design teams.
	317	- There is no I-5 symbol illustrated in north Los Angeles County, just central Los Angeles.	The map style and map contents were reviewed prior to the adoption of the LRTP. We will share this comment with the appropriate project and design teams.
	318	- Transportation Demand Management (TDM)/Transportation System Management (TSM) programs are not mentioned in the Draft LRTP	The LRTP recognizes that TDM is an important strategy for managing congestion and addressing environmental goals. We will continue to be a regional leader in TDM and look forward to collaborating with our local partners to manage demand, reduce the number of SOV trips, and provide new transportation options. Additionally, Metro recognizes that telecommuting has grown steadily over the past decade and that COVID-19 has dramatically accelerated that trend. We will continue to support and analyze this trend.
	319	- Since the Metrolink Antelope Valley Line Capital and Service Improvements Project is funded, should it be depicted in the Draft LRTP tables?	We are reviewing all project details, including the available funding, the project cost, and the opening year in advance of the adoption of the LRTP. We will share this comment with the appropriate project team.
	320	- How can north Los Angeles County access numerous programs that appear to be centered/focused around the Metro Service Area, like Micro-Transit? Is the TDA Article 8 process supposed to remedy the apparent structural funding inequity to north Los Angeles County taxpayers?	This is not directly addressed in the LRTP. We will forward your question on to the appropriate department at Metro.
	321	NCTC Urges Equitable FundingIn conclusion, the NCTC Subregion appreciates the bolstered partnership with Metro and the opportunity to comment on the Draft LRTP—Our Next LA, and we urge meetings with Metro and NCTC staff to discuss the Draft Plan prior to receiving the “matrix” responses in the Final Plan.The NCTC Subregion has sought mobility improvements for north Los Angeles County—the I-5, SR14, SR138, SR126—while seeking improvements to the only rail service to the region—the Metrolink Antelope Valley Line (AVL). The only Metrolink line entirely within Los Angeles County.The NCTC subregion has continually made the case for equitable transportation funding and when given the opportunity to partner with Metro we have seen tremendous results, from receiving federal and state grant awards, to residents using the new transportation improvements at levels way above the rest of Los Angeles County.For many north Los Angeles County residents, transit options have many transfers, take numerous hours, and are not available 24/7 to match their work schedules. For the #1 Subregion in Land Area, the freeway arterial network is part of the transit system residents rely on. The SR14 and SR138 serve many of the Equity Focus Communities in the Antelope and Santa Clarita Valley’s and residents are seeing accidents and fatalities rise above “acceptable” Caltrans standards.  Funding must be included in the 2020 LRTP Plan to provide safety-related improvements by both Metro and Caltrans to north Los Angeles County residents and businesses using the SR14 and SR138. The NCTC Subregion has seen enough studies and plans for safety related fixes for the SR14 and SR138—they need to be funded and completed in this LRTP Plan. North Los Angeles County residents should not have to endure more fatal accidents due to lack of highway funding.The NCTC Subregion has sought viable alternatives to the freeway, but the region is constantly told to wait your turn for Metrolink Antelope Valley Line rail improvements. We urge Metro and Metrolink to fund the \$698.1 million AVL improvements in the 2020 LRTP Plan—now.The Census Bureau and Metro demographic map facts cannot be swept under the rug any longer, Equity Focus Communities exist in north Los Angeles County and it is time Metro acknowledges the Subregion needs “boxes to stand on” with action, planning assistance, and funding. The NCTC Subregional staff has limited resources to properly address the Equity Focus Communities myriad of issues. The NCTC JPA needs Metro’s assistance. The NCTC Subregion looks forward to working with Metro and all transportation partners in Los Angeles County to make critical mobility investments in north Los Angeles County over the next 30 years.	Comment noted.

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Agencies and Organizations

Org	#	Comment Received	Response
Los Angeles Department of Water and Power	322	<p>The Los Angeles Department of Water and Power (LADWP) appreciates this opportunity to submit comments on Metro’s 2020 Long Range Transportation Plan. The proposed plan shall take into consideration any impacts to LADWP’s infrastructure. LADWP reserves the right to review and approve improvements within LADWP facilities. In order to fully address potential Right of Way issues, LADWP is providing the following comments and conditions which include requests for additional information from the project proponent:</p> <p>The Right of Way Engineering Group on behalf of Los Angeles Department of Water and Power’s (LADWP) Power System coordinated the review of the request and determined additional information is needed before any thorough review can be provided.</p> <p>A) The information provided, to date, is inadequate for properly reviewing the proposed Metro improvements. We therefore reserve the right to comment until more detailed information is provided. The more detailed information shall include, but not limited to, impacted Assessor’s Parcel Numbers (APN), property lines, plans showing setbacks from the proposed project areas to transmission line towers, including all above ground objects (i.e. fencing, gates, posts, structures), lighting posts, excavations, and any temporary structures that may affect the LADWP facilities.</p> <p>B) Provide plans illustrating the LADWP Transmission Line Right of Way boundaries, including distribution power lines and waters lines, within the Metro improvements. Include towers and clearances from proposed improvements. Also, provide grading plan and utility plans, including any other plans illustrating the impacts to the LADWP Transmission Line Right of Way, including distribution power lines and water lines.</p> <p>C) Relocation of LADWP facilities may be required if the impacts by Metro’s improvements interfere with the operation and maintenance of Power System facilities. The relocation of these facilities will be at the sole cost of Metro. Please note, Water System’s review has not been incorporated into this response and will require their review when more detailed plans are provided.</p> <p><u>Be advised the following conditions shall also apply:</u></p> <p>3) Metro shall be responsible for the maintenance of the project areas and shall keep the area in a neat and clean condition within LADWP Facilities. It is our understanding Metro will assume responsibility for the maintenance of the project improvements, and for all the associated risks and liabilities. LADWP will not be liable for any damage to Metro improvements by LADWP’s operation and maintenance activities.</p> <p>4) A permanent, unobstructed 20-foot wide roadway (patrol road), accessible at all times by LADWP maintenance personnel shall be provided and maintained. A wider roadway width may be required on curved segments. The roadway must remain open and unobstructed, excluded from any watering and kept as dry as possible at all times.</p> <p>5) No equipment over fourteen-feet high shall be used near the LADWP Transmission Lines without the written permission of the LADWP. Equipment higher than fourteen-feet will require submittal of a Conductor Survey to the LADWP Transmission Engineering Group to ensure clearances meet the State of California, Public Utilities Commission, General Order No. 95.</p> <p>6) Conductor Clearances will be subject to the review and approval of LADWP’s Transmission Engineering Group. The LADWP may need a copy of the conductor survey illustrating the cross sections showing our existing conductors and proposed improvements. See attached LADWP Conductor Survey Instructions. The Transmission Engineering Group will use the data to calculate and confirm that conductor clearances meet the State of California, Public Utilities Commission, General Order No. 95.</p> <p>7) All construction activities shall adhere to the LADWP’s Standard Conditions for Construction. See attached.</p> <p>8) Provide the location and elevations (heights) of all above and below ground structures, including the cross sections of existing and proposed improvements within and adjacent to the LADWP Transmission Line Right of Way. All ground elevations are to remain unchanged from existing conditions after proposed improvements associated with Metro’s improvements are completed. Cut &amp; fill slopes inside the LADWP Transmission Line Right of Way steeper than 2 horizontal to 1 vertical require retaining structures or geotechnical report approval. Note: Grading activity resulting in a vertical clearance <del>between the ground and the transmission line conductor elevation less than thirty-five (35) feet or as noted in the State of</del></p>	<p>Comment noted.</p>

**Attachment C - LRTP Public Comment Reponse Matrix**

Agencies and Organizations

Org	#	Comment Received	Response
		<p>10) All aboveground metal structures including, but not limited to, pipes, drainage devices, fences, and bridge structures located within or adjoining the right of way shall be properly grounded, and shall be insulated from any fencing or other conductive materials located outside of the right of way. For safety of personnel and equipment, all equipment and structures shall be grounded in accordance with State of California Code of Regulations, Title 8, Section 2941, and National Electric Code, Article 250.</p> <p>11) The right of way contains high-voltage electrical conductors, therefore, Metro shall utilize only such equipment, material, and construction techniques that are permitted under applicable safety ordinances and statutes, including the following: State of California Code of Regulations, Title 8, Industrial Relations, Chapter 4, Division of Industrial Safety, Subchapter 5, Electrical Safety Orders; and California Public Utilities Commission, General Order No. 95, Rules for Overhead Electric Line Construction.</p> <p>12) California Code of Regulations, Title 8, Section 2700 defines “qualified electrical workers” as “a qualified person who by reason of a minimum of two years of training and experience with high-voltage circuits and equipment and who has demonstrated by performance familiarity with the work to be performed and the hazards involved.” At all times during installation, replacement, and/or maintenance of any improvement authorized within the LADWP Transmission Line Right of Way, Metro shall have at least one qualified electrical worker on site to observe said work and ensure all OSHA required safety protocols are followed.</p> <p>13) No grading shall be conducted within the LADWP Transmission Line Right of Way without prior written approval of the LADWP.</p> <p>14) No structures or improvements shall be constructed within the LADWP Transmission Line Right of Way without prior written approval of the LADWP.</p> <p>15) An area at least 100 feet around the base of each tower must remain open and unobstructed for necessary maintenance, including periodic washing of insulators by high pressure water spray.</p>	
Los Angeles County	329	<p>We have reviewed Metro’s draft Long Range Transportation Plan and have the following comment: Metro and Los Angeles County have a long history of partnership and investment on Traffic Signal Synchronization Projects however specific funding is not identified in the proposed plan for these projects. Traffic signal coordination is considered by the USDOT as being under the general ITS umbrella. On Page 36, Priority Area 2, please consider adding traffic signal synchronization. Strategy 2.1, please add to Action 2.1c. “Implement arterial ITS programs, including Countywide Signal Priority Program and traffic signal synchronization.”</p>	<p>This will be addressed in the final LRTP prior to adoption.</p>
City of West Hollywood	330	<p>Thank you for the opportunity to review the draft 2020 Metro Long Range Transportation Plan (LRTP). Our comments center around the Crenshaw/LAX Line Northern Extension (CNE) and how it is represented in Figure 8 and Figure 9, the “Major Transit Project” list and “Planned Transit Projects” map on pages 20 and 21 respectively. The Metro Board is expected to consider authorizing a contract for the CNE Environmental Impact Report (EIR) in August 2020. Based on multiple discussions with Metro Staff, we anticipate a recommendation for further analysis of several alignments in Metro’s upcoming environmental analysis including the Hybrid alignment, the preference of the City of West Hollywood and a number of other stakeholders, as well as a potential terminus station at the Hollywood Bowl rather than the Hollywood/Highland Metro Red Line Station. The “Planned Transit Projects” map (Figure 9) on page 21 of the Draft LRTP document shows a single alignment for the CNE project that appears to run along La Brea and stops short of the Hollywood Bowl. We concur with the footnote below the map which reads “Final alignments to be identified during environmental processes.” However, since neither the City of West Hollywood nor the City of Los Angeles has formally endorsed the La Brea alignment, it is inappropriate for it to remain the placeholder in Metro documents where only one alignment is shown. We understand that the map in the Draft LRTP is not intended to prejudice the selection of any specific alignment and respectfully request that either the Hybrid Alignment or a more generalized representation of the CNE project that is not specific to any one alignment be shown in the Final LRTP.</p> <p>The “Major Transit Project” list (Figure 8) on page 20 lists \$4.7 Billion and 2047 as the open year of the CNE project. This list does not currently appear to differentiate between projects seeking acceleration and the Measure M timeline, but if changes are made to this list to highlight acceleration efforts underway with other projects, we respectfully ask that a footnote be included to acknowledge ongoing interjurisdictional efforts to accelerate the CNE project in accordance with the Board Adopted Acceleration Policy and next steps for the CNE project such as the City of West Hollywood Funding and Project Delivery Strategic Plan, the City of Los Angeles Council Motion Supporting Acceleration of the CNE, and the upcoming Metro EIR to be conducted in fulfillment of Metro’s 2016 commitment to get the project shovel-ready for future funding opportunities. We look forward to continued and expanded partnership with Metro as we work to implement the transformative mobility benefits of Measure M and the Draft LRTP. Thank you for your attention to this matter.</p>	<p>We are reviewing all project details, including the available funding, the project cost, and the opening year in advance of the adoption of the LRTP. We will share this comment with the appropriate project team.</p>

**Attachment C - LRTP Public Comment Reponse Matrix**

Agencies and Organizations

Org	#	Comment Received	Response
City of Claremont	333	<p>I am writing on behalf of the City of Claremont to request that the draft plan be amended to accurately reflect the status of a critically-important project for our City and our residents, workers, and students - completion of the Metro Gold Line Foothill Extension to Claremont.</p> <p>The Draft LRTP currently includes completion of the Foothill Extension to Claremont in 2028, without recognition that the project has a \$450 million funding gap. The project is under construction now, but only the first nine miles of the 12.3 mile project is fully funded. We request that the plan be amended to accurately reflect the current funding gap, and request that the extension to Claremont be included as part of any strategic unfunded project list that staff is developing to be part of the final plan.</p> <p>The City also urges Metro to help secure funds necessary to make the extension to Claremont possible within the currently underway design-build project. The Foothill Gold Line Construction Authority, the agency responsible for planning and building the line, has a firm fixed price bid in hand that is good through October 2021 and would allow the project to be completed to Claremont by 2028 (meeting the Metro board goal of completing the project to Claremont by the 2028 Olympic Games). As Metro seeks state and Federal infrastructure funding, we urge that this truly shovel-ready project be included on the list of projects for funding.</p>	<p>We are reviewing all project details, including the available funding, the project cost, and the opening year in advance of the adoption of the LRTP. We will share this comment with the appropriate project team.</p>
City of Los Angeles	339	<p>The City of Los Angeles Departments of Transportation (LADOT) and City Planning (LACP) compliment the Los Angeles County Metropolitan Transportation Authority (Metro) on its substantial planning and public outreach efforts to develop the Draft 2020 Long Range Transportation Plan (draft 2020 Plan), released on May 29, 2020. LADOT leads transportation planning, project delivery, and operations in the City of Los Angeles and LACP creates and implements plans, policies, and programs that support community health, sustainability, and inclusivity in the City's neighborhoods. LADOT and LACP have reviewed the draft 2020 Plan and appreciate the opportunity to provide comment. We understand that Metro is unique among the nation's transportation agencies, serving as the primary transportation planner and coordinator, designer, builder, and operator for the most populous county in the country. As the regional transportation planning agency, Metro is responsible for advancing the regional multimodal transportation system to provide safe, affordable, and equitable mobility for Los Angeles County residents, workers and visitors, as well as to support the region's economy and help achieve local and regional environmental and community quality of life goals. An update to the 2009 Long Range Transportation Plan, the draft 2020 Plan presents Metro's approach to planning, constructing, managing, and modernizing the Los Angeles region's multimodal transportation system, as well as highlights how the regional agency must partner with the City of Los Angeles and the other 87 cities and unincorporated areas in the County to deliver this ambitious scenario over the next 30 years. LADOT and LACP laud Metro's plans to add 106 miles of fixed guideway transit, improve 22 transit corridors, and deliver 200 stations for the regional public transit network over the next 30 years - the most aggressive transit expansion in the nation.</p> <p>Beyond transit investments, we appreciate that Metro's draft 2020 Plan includes funding to maintain and modernize the region's system of roads and freeways, to deliver multi-use active transportation facilities, to enhance bus travel, and to expand access to on-demand mobility options such as bike sharing, car sharing, micro transit, and freight-focused technologies. Also, Metro's Transit Oriented Communities policy and planned joint development projects align well with the City of Los Angeles' work to integrate land use and transportation planning to support affordable housing production and job creation near high-quality public transit options with safe and comfortable connections for transit users' first last mile journeys. Consistent with the City of Los Angeles' transportation assessment guidelines, the draft 2020 Plan acknowledges that it is not possible, nor desirable, to physically expand vehicle capacity on the region's network of arterials and freeways to alleviate congestion. Therefore, Metro must partner with cities and Caltrans to implement effective management strategies that maximize the person throughput and utilize existing transportation facilities, such as transit priority facility enhancements, active curb management strategies, integrated corridor management solutions, innovative congestion pricing, and improved parking management. Metro estimates that implementation of the major capital projects, programs, and bold policies included in the draft 2020 Plan will significantly improve the regional transit system's coverage, enhancing access to high-quality transit, while resulting in modest emissions reductions. Today, only 8% of Los Angeles County residents and 16% of the region's workers have access to a Metro rail or bus rapid transit station within a 10-minute walk. Metro estimates that implementation of the draft 2020 Plan would increase access to transit so that 21% of residents and 36% of workers would be a 10-minute walk to high-quality transit. Metro's scenario modeling anticipates that delivering the draft 2020 Plan would increase daily transit trips by 81%, while decreasing greenhouse gas (GHG) emissions by 19% and particulate matter emissions by 17%, relative to forecasted 2047 levels.</p>	<p>Comment noted.</p>



**Attachment C - LRTP Public Comment Reponse Matrix**

Agencies and Organizations

Org	#	Comment Received	Response
	340	<p>As Metro finalizes the draft 2020 Plan, we encourage the following considerations:                      Develop and include a fiscally unconstrained strategic list of projects that may be anticipated for future consideration, if additional new revenue or funding opportunities become available. Currently, Metro's draft 2020 Plan uses a series of projected revenue and organizational capacity assumptions to present a fiscally constrained list of projects for Los Angeles County. However, we understand that the listed projects will not meet all future mobility needs and consumer demands forecasted for 2020-2050. Thus, Metro can continue leading the region to meet momentous challenges in the coming decades – including but not limited to serving a growing, diverse population, adapting to the global climate change impacts, responding to technological changes and new innovations – by developing a fiscally unconstrained list of regional transportation investments and associated bold policies. This project list may inform the Southern California Association of Government's (SCAG) preparation of the next Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) and related regional transportation demand forecasting model. This list can also articulate the need for mobility improvements beyond the current Measure R and Measure M infrastructure program and mobility investments required to meet state sustainability goals. We propose a list of projects for consideration in a fiscally unconstrained strategic project list in Attachment A. Prior to releasing the Countywide Strategic List to SCAG for future updates and amendments to the RTP/SCS, we request that Metro contact LADOT's Transportation Planning and Policy Division manager, Rubina Ghazarian, to ensure you have the City's most recent fiscally unconstrained strategic project list.</p>	<p>This will be addressed in the final LRTP prior to adoption.</p>
	341	<p>Increase coordination with City Planning to align Metro's long range planning efforts with the city's evolving mobility networks. Mobility Plan 2035, the transportation element of the City's General Plan, identifies networks of streets that the City prioritizes for transit, bicycle, and pedestrian infrastructure improvements. For example, the Transit Enhanced Network (TEN) results from a comprehensive data analysis of factors such as ridership, destinations, employment, and population that will evolve as transit needs change and the City updates Community Plans (land use plans) and potentially amends the TEN. Metro has done a noteworthy job of providing transit coverage on the TEN as it is currently configured through the NextGen Bus Plan proposal, and we encourage ongoing collaboration between Metro and City Planning staff. Metro may further consider how to align its countywide active transportation planning and investments with the City's Bicycle and Pedestrian Enhanced Networks.</p>	<p>Metro coordinates with and supports our local, regional, and state partners. We cannot address all the transportation challenges facing LA County alone and we rely on the help of our partners. We look forward to continued collaboration to advance our vision for LA County.</p>
	342	<p>Discuss how projects can be prioritized to directly benefit Equity Focus Communities. Metro's robust equity platform framework, which includes its TOC and joint development policies, guides the implementation of programs aimed at reducing transit fare, providing local business support, and offering a variety of youth programs. Building on these initiatives, Metro has developed data-driven tools to elevate equity in decision-making such as the designation of Equity Focus Communities and a Transit Propensity Index that considers physical, locational, and socio-economic factors in estimating potential transit demand. The draft 2020 LRTP also proposes development of a Racial and Socioeconomic Equity Action Plan. We support these tools and encourage Metro to continue to create systems and structures that ensure data-driven and transparent implementation of its equity-focused policies and action plans. Metro's draft 2020 Plan defines Equity Focus Communities (EFCs) as areas where households are low-income, and either majority non-white or have no access to a vehicle -- about 30% of the entire county's population. Metro's acknowledgement that people living in EFCs are affected by historic disinvestment, experience reduced access to opportunity and housing, and are likely burdened by environmental injustices presents new opportunities to address these issues in the coming decades. The draft 2020 Plan presents a powerful draft definition for equity and commits to investing in EFCs. The Final 2020 Plan can include more meaningful discussion on how Metro's investments will be prioritized to directly benefit and improve the lives of people living in EFCs and how funding will be allocated for capital projects on the basis of equity. As one example, the NextGen Bus Plan sets out to improve bus service quality in communities with the greatest mobility needs by focusing bus service improvements in LA County Census Tracts with higher Transit Propensity Index values. The assumptions used for that Index closely align with the characteristics of present-day transit riders who continue to ride Metro buses, despite the systemwide ridership decline observed during the current COVID-19 public health emergency. This data can inform how Metro prioritizes future transit investments. The Final 2020 Plan should similarly reconsider the inclusion of projects that may exacerbate the barriers to mobility and burdens of air pollution and poor health outcomes associated with transportation-related emissions experienced by Los Angeles County residents. These projects include:                      o Planned projects that widen or otherwise increase freeway capacity                      o Funding arterial street widening projects                      o Other projects, programs, or policies that induce single-occupancy vehicle travel</p>	<p>Addressing historical inequities is a guiding principle for the LRTP and a core tenet for Metro's current planning activities. Metro's Equity Platform will help guide future planning studies and investment decisions.</p> <p>The LRTP's investment plan is built upon previous efforts and the Metro Board's previous directives. The Measure M expenditure plan was developed with significant public input and was passed by over 70% of LA County voters, and much of the funding allocated for projects and programs included in the LRTP was written into the Measure M statute. It is important for Metro to support all modes while emphasizing our commitment to transit and sustainable transportation options; however, there will be additional opportunities to influence future investment decisions. Local jurisdictions receive funding in the form of "Local Return" and most subregions receive funding through "Multi-year Subregional Programs", which can be used for a variety of project types. Metro encourages stakeholders to provide your feedback directly to local and regional governments as well as to Metro on future planning efforts. The Short Range Transportation Plan, to be completed following the LRTP, will re-evaluate the financial realities facing LA County over the next decade and will provide an opportunity for Metro and our partners to examine the prioritization of funding.</p>

**Attachment C - LRTP Public Comment Reponse Matrix**

Agencies and Organizations

Org	#	Comment Received	Response
	343	Create more opportunities to utilize development incentives in transit-reliant communities. State and local streamlining and affordable housing incentive programs present further opportunities to add much-needed affordable housing near high-quality transit. As Metro finalizes the alignments of major capital transit and rail lines, we encourage Metro to think strategically about the location of stations that can support development incentives in transit reliant communities that have been disinvested. The configuration of Metro's bus network in regard to frequency and stop locations also impacts the availability of affordable housing and development incentives. DCP looks forward to continuing discussions with Metro to understand how the consolidation of rapid and local bus lines under NextGen will alter the availability of development incentives through the state's density bonus program and CEQA streamlining through the designation of transit priority areas.	Metro is committed to addressing working with local partners to address the housing shortages facing our region. Through our Joint Development Program on Metro-owned land, and through our Transit Oriented Communities program, we'll seek to create new housing around transit and will encourage transit-supportive land use policy.
	344	Assess sustainability and environmental benefits of projects, programs, and policies to inform decision making. Metro's update of the Long-Range Transportation Plan offers an opportunity to propose inspired strategies to help the region achieve State climate action and sustainability targets. In conformance with Senate Bill 743, Senate Bill 32, and statewide sustainability goals, we encourage Metro to more closely assess the performance of proposed strategies to effectively reduce vehicle miles traveled (VMT) and associated greenhouse gas emissions, improve access to jobs and services through mobility management, and consider sustainability strategies in all projects. We suggest that Metro compare multiple scenarios to prioritize project lists and determine suitability of projects, programs, and plans given the urgent need for significant climate action. As an example, in designing or retrofitting freeway projects we encourage Metro to coordinate with Caltrans to integrate natural environment protection and mitigation measures, such as wildlife crossings and culverts.	Sustainability is a guiding principle in this LRTP and a foundational element of our activities. Metro believes that environmental sustainability should carry through to each project, program, and policy. The LRTP details several specific strategies to address sustainability and our new report that will be published soon, Moving Beyond Sustainability, provides greater detail on how Metro will lead in sustainability.
	345	Reallocate dedicated funding to regional bus capital and regional active transportation facilities to enhance the draft 2020 Plan's sustainability and environmental justice performance. Metro's draft 2020 Plan provides \$400 billion for investments in transportation over the next 30 years, with over 70% of funding managed directly by Metro from federal and state programs or generated by four county voter-approved sales tax measures. The draft 2020Plan proposes to spend just over \$331 billion (83%) of countywide funding over the next three decades directly on regional multimodal transportation projects, programs, and policies in accordance with the following breakdown: nearly \$145 billion (37%) in investments for countywide transit operations and state of good repair; about \$76 billion (19%) in road investments; nearly \$61 billion (15%) in rail and transitway capital investments; just over \$22billion (5.5%) in freeway and managed lane investments; nearly \$21 billion (5%) in bus capital investments; and nearly \$7 billion (1.7%) in regional and local active transportation facility investments. We encourage Metro to review and reassess the currently proposed funding allocations for bus capital and active transportation facilities to ensure that Metro and its local partners can deliver effective regional active transportation and bus transit priority facilities across jurisdictional boundaries. The City of Los Angeles is eager to continue working with Metro to create a regional active transportation network, as expressed in Metro's Active Transportation Strategic Plan, and implement bus transit priority facilities, through our NextGen Bus Speed Working Group and beyond, to encourage more people to walk, roll, bicycle, or easily transfer between integrated networks. Significant investments in sustainable transportation infrastructure, above and beyond the proposed in the draft 2020 Plan, will meet LA County stakeholders' calls for better transit, complete streets, and access to opportunity. Reallocated funding to support a greater focus on advancing sustainable mobility networks may yield greater VMT and GHG reductions as called out in LA's Green New Deal.	The LRTP's investment plan is built upon previous efforts and the Metro Board's previous directives. The Measure M expenditure plan was developed with significant public input and was passed by over 70% of LA County voters, and much of the funding allocated for projects and programs included in the LRTP was written into the Measure M statute. It is important for Metro to support all modes while emphasizing our commitment to transit and sustainable transportation options; however, there will be additional opportunities to influence future investment decisions. Local jurisdictions receive funding in the form of "Local Return" and most subregions receive funding through "Multi-year Subregional Programs", which can be used for a variety of project types. Metro encourages stakeholders to provide your feedback directly to local and regional governments as well as to Metro on future planning efforts. The Short Range Transportation Plan, to be completed following the LRTP, will re-evaluate the financial realities facing LA County over the next decade and will provide an opportunity for Metro and our partners to examine the prioritization of funding.
	346	Invest in regional transportation data and modeling tools available to jurisdictions and external partners to strengthen regional coordination. Currently, Los Angeles County cities, subregional entities, and their external partners tend to use varied transportation datasets and analysis methods to help plan, prioritize, and evaluate transportation improvements within their jurisdictions. Varied modeling methodologies, technical capacity, and incompatible evaluation frameworks makes coordination across jurisdictional boundaries challenging and inefficient. Similar to the outreach and information exchange used to build regional consensus for the Metro NexGen Bus Plan, we hope that Metro will augment its draft 2020 Plan scenario modeling methods using rich origin-destination data, while also making these datasets and analytics available for local agencies for local transportation planning. We also encourage Metro, in collaboration with SCAG, to lead the region in conforming to the requirements of Senate Bill 743by investing in sub-regional sketch planning tools that can lead to more consistent and transparent evaluations. Similarly, regional location based data services and accessibility analysis tools can streamline and improve access to information for jurisdictions, strengthening regional planning efforts.	Thank you for this comment. As a Regional Transportation Planning Agency, Metro strives to be a resource for the local jurisdictions within LA County. We continually look for new ways to support the planning and implementation efforts of our local partners. We will share this comment with the appropriate departments within Metro.

**Attachment C - LRTP Public Comment Reponse Matrix**

Agencies and Organizations

Org	#	Comment Received	Response
	347	Advance system security and public trust enhancement strategies that are inclusive and equitable. We acknowledge and applaud Metro’s continued efforts to address riders’ safety concerns. Metro’s aim to improve riders and communities’ experience with the transit system and other agency mobility services can be bolstered by investing in strategies recommended in Metro’s Understanding How Women Travel Study Report, Girls and Women Governance Council and Customer Experience Plan, including: <ul style="list-style-type: none"> <li>o Develop a Metro Transit Ambassadors program to improve customer service</li> <li>o Expand access to TAP reloading and pass purchasing countywide</li> <li>o Maintain rider amenities at stops and stations to enhance safety and reduce anxiety</li> <li>o Offer safe and affordable on-demand options near major transit hubs</li> <li>o Implement inclusive fare policies (i.e., fare capping, easier transfers)</li> <li>o Enhanced cleanliness and safety protocols on the Metro transit system in response to the current COVID-19 public health emergency should continue focusing on protecting transit operators</li> </ul>	Metro is committed to building a World Class Bus system. Improvements planned for the system include those to enhance the customer experience, improve the system operations, and to provide reliable access to riders where and when they need to travel. We recognize that the transit system has lost ridership over the last several years and are committed to improving our bus service. Through our NextGen Bus Plan, Metro is redesigning our entire bus network and these changes will be implemented over the next 18 months. Working with local partners, Metro is exploring projects to improve bus speed and reliability in congested corridors. Additional efforts to improve customer experience, including safety and security, are underway as well.
	348	Invest in mobility management solutions that increase transportation system efficiencies and improve equitable access to destinations. Los Angeles County is home to 4.4 million employees, with a projected increase to 5.4 million by 2047. Mobility management solutions, such as a countywide Transportation Demand Management program for existing employers can help build a regional foundation strengthening jurisdictional ordinances. This framework can result inconsistent regulations, increased awareness and compliance, a larger menu of strategies, and monitoring data that allows for comparison and iteration. A regional TDM framework can pave the way for investment in regional mobility as part of land use developments’ TDM strategies, mitigation measures, or through a regional VMT exchange program – similar to cap and trade. LADOT is interested in collaborating with Metro and jurisdictions in LA County to expand our mobility investment toolkits over the next 30 years to include mobility management solutions.	The LRTP recognizes that TDM is an important strategy for managing congestion and addressing environmental goals. We will continue to be a regional leader in TDM and look forward to collaborating with our local partners to manage demand, reduce the number of SOV trips, and provide new transportation options. Additionally, Metro recognizes that telecommuting has grown steadily over the past decade and that COVID-19 has dramatically accelerated that trend. We will continue to support and analyze this trend.
San Gabriel Valley Council of Govts	360	On behalf of the San Gabriel Valley Council of Governments (SGVCOG), we are writing to express our appreciation for the opportunity to comment on the draft Long Range Transportation Plan Update. The SGVCOG is a joint powers authority of thirty-four-member agencies that are located in the San Gabriel Valley. The SGVCOG is also the largest and most diverse sub-regional government entity in Los Angeles County. The SGVCOG strongly supports Metro’s plan to deliver significant mobility benefits to Los Angeles County through major capital projects, programs, and bold policies. We deeply appreciate the stakeholder process your agency is undertaking and the ability to weigh in on the proposed update to the Long Range Transportation Plan. We want to take the opportunity to thank Metro for acknowledging the critical need for infrastructure and transportation improvements in the San Gabriel Valley, especially for including the following projects in the draft update: <ul style="list-style-type: none"> <li>• Alameda Corridor East Grade Separation Phase 2</li> <li>• Eastside Extension Phase 2 Transit Corridor</li> <li>• Gold Line Transit to Claremont *</li> <li>• I-605/I-10 Interchange</li> <li>• SR-57/SR-60 Interchange Improvements</li> <li>• SR-60/I-605 Interchange HOV Direct Connectors</li> <li>• SR-710 North Corridor Mobility Improvement Projects</li> </ul> *The plan should indicate additional funds are needed to extend the line to Claremont.	Comment noted.
	361	Implementing Cleaning Practices to Protect Riders from Disease Transmissions This action should be included in Strategy 1.6 under Priority Area 1. While the SGVCOG recognizes that Metro has been actively implementing protective measures to protect employees and residents from being exposed to COVID-19, it is vital to ensure that these practices continue in the future. Metro should continue to clean buses and trains daily with EPA-approved disinfectants and actively review cleaning protocols to ensure that they are up-to-date.	The LRTP was developed prior to the onset of the COVID-19 pandemic. The LRTP will include a new discussion of the COVID-19 pandemic and the variety of impacts it has on the contents of the LRTP, including the impacts on Metro’s financials, operations, and other efforts. The LRTP is the 30-year plan for Los Angeles County. The near-term strategies and actions are to be determined and will be documented in the Short-Range Transportation Plan (S RTP). The LRTP is a living document that will be amended as necessary as the county’s priorities change and as financial, technological, or demographic changes warrant updates to the plan. The LRTP will include a new discussion of the COVID-19 pandemic and the variety of impacts it has on the contents of the LRTP. The new financial realities facing LA Metro will be explored extensively over the next several years and will be documented in the S RTP.
	362	Support Efficient Goods Movement Strategy 2.5 under Priority Area 1 should be rewritten to reflect “support efficient and sustainable goods movement.” Goods movement projects and the Los Angeles County Goods Movement Strategy must emphasize air quality improvements, safety, and freight efficiency.	This will be addressed in the final LRTP prior to adoption.
	363	Complete the San Gabriel Valley Transit Feasibility Study and Implement the Resulting Recommendations We recommend this action be added to Strategy 2.6 under Priority Area 2. While the San Gabriel Valley Transit Feasibility Study will be identifying alternative transit solutions to serve the mobility needs of the San Gabriel Valley, implementing the recommendations will effectively address regional circulation issues	We are reviewing all project details, including the available funding, the project cost, and the opening year in advance of the adoption of the LRTP. We will share this comment with the appropriate project team.
	364	Support the San Gabriel Valley Regional Bikeshare Program We also recommend adding this action to Strategy 3.3 under Priority Area 3. The San Gabriel Valley Regional Bikeshare Program was recently launched earlier this week in South El Monte with the goals of decreasing drive-alone trips and increasing the share of bicycling trips in the San Gabriel Valley. Effective active transportation infrastructure is critical in providing connectivity to the transit hubs in the San Gabriel Valley.	We believe this element is addressed appropriately elsewhere in the LRTP.
	365	Indicate Extension of the I-10 ExpressLane east of I-605 to the San Bernardino County Line The SGVCOG requests Metro label the improvements in Figure 15 “Planned Highway Projects” as the I-10 ExpressLane extension to the San Bernardino County Line.	We are reviewing all project details, including the available funding, the project cost, and the opening year in advance of the adoption of the LRTP. We will share this comment with the appropriate project team.

**Attachment C - LRTP Public Comment Reponse Matrix**

Agencies and Organizations

Org	#	Comment Received	Response
	366	Additionally, we highly recommend Metro staff to increase the size of monotone maps that are included in the draft, as many of these maps are ineffective in illustrating projects and routes in the draft update due to their minimal sizes. The SGVCOG looks forward to continued opportunities to comment on specific proposals and plans.	The map style and map contents were reviewed prior to the adoption of the LRTP. We will share this comment with the appropriate project and design teams.
Strategic Actions for a Just Economy	199	Hello,I am writting this on behalf of Strategic Actions for a Just Economy (SAJE) who is a member of the ACT LA Coalition who advocates for Transit Justice.The plan appears to relate the ability to reduce transit costs specifically with congestion pricing. We do not believe that the ability to offer fare-free transit should rely exclusively on congestion pricing, especially when there is so much research to do regarding the effects that congestion pricing has on low-income communities. The LRTP names congestion pricing as an overall goal for the development and improvement of the transit system in the county. Our coalition has some concerns and reservations due to currently unanswered questions about how congestion pricing is currently affecting our county and how the expansion of congestion pricing will impact our constituencies. Congestion pricing has equity challenges; any time you institute a toll for access you exclude low-income people that are unable to pay. Furthermore, viable alternatives for some essential trips such as work, school and medical appointments may not be available until better bus service is achieved. To mitigate these challenges, we should improve public transportation quality and make transit free before congestion pricing is actualized. Lastly, the Long Range Transportation Plan was released in the middle of the pandemic that we are currently suffering from in our region and world wide. It is irresponsible that the draft plan does not make mention of the effects that this has caused on its transit dependent citizens. We urge Metro to take into consideration our questions and concerns regarding the draft plan. Thank you.Maria Patiño GutierrezProgram Coordinator SAJE	<p>Addressing historical inequities is a guiding principle for the LRTP and a core tenet for Metro's current planning activities. Metro's Equity Platform will help guide future planning studies and investment decisions.</p> <p>Metro is exploring road pricing as an option for reducing congestion, while at the same time providing alternatives to driving. Our Traffic Reduction Study is currently studying several pricing mechanisms and complimentary mobility improvement in select candidate corridors; however, the specifics of the recommendations stemming from the study are unknown at the moment.</p>
	327	<p>Dear Metro Board and Staff,</p> <p>We write this letter to comment on the "Our Next LA" 2020 Long Range Transportation Plan. We believe that the overall goals of the Long Range Transportation Plan should align with Metro's Equity Platform and prioritize the needs of the mostly low income residents of the County of Los Angeles who are transit dependent.</p> <p>ACT-LA is made up of 37 organizations from LA County that have come together "to create community transit – just, equitable, sustainable transit systems and neighborhoods for ALL people in Los Angeles, placing the interests of low-income communities and communities of color first as we create a more sustainable city." As a coalition we are advocating for Metro to become a sanctuary for the Los Angeles public, to provide a high level of service and enact policies that would result in "transit justice," such as:</p> <ul style="list-style-type: none"> <li>- Eliminate fares. Los Angeles residents are already paying for the transit system through our sales tax. The average household income for a person who rides the bus is \$26,900, with over 57% of Metro bus riders living below the poverty line.</li> <li>- End policing contracts. We must invest in true community-centered safety solutions that make ALL riders feel safe. Also, we can use the hundreds of millions of dollars saved on improving bus service, bus infrastructure and eliminating fares.</li> <li>- Focus on improvements to the bus system. New train lines have taken the air out of the room when it comes to Metro's mission of creating a world class system. Metro staff and board members often say that buses are the workhorses of the system, and clearly buses are what most riders depend on. Our coalition includes organizations who work with transit riders, the majority of whom are bus riders and who have expressed to us the need for a better, fare-free transit system. Therefore, we support the Long Range Transportation Plan's efforts to identify access to opportunity, including by specifically adding a goal of identifying ways to "Reduce Transit Cost." Our members have told us that they often have to choose between paying for a bus pass for a month to get to and from work or to pay for adequate groceries. Although Metro currently has fare reduction programs, the reality is that many of these are not currently accessible to its riders, whether because of lack of education regarding the program, or because even though riders are low income, they are above the threshold to qualify. Our coalition is committed to working with Metro to identify ways to achieve the goal of fare-free transit in the short-term rather than longer-term. Given our priorities listed above, our coalition is in full support of discussions within Metro to eliminate fares. However, we strongly believe this goal needs to be decoupled with the goal of regional congestion pricing. The plan appears to relate the ability to reduce transit costs specifically with congestion pricing. We do not believe that the ability to offer fare-free transit should rely exclusively on congestion pricing, especially when there is so much research to do regarding the effects that congestion pricing has on low-income communities. <p>The LRTP names congestion pricing as an overall goal for the development and improvement of the transit system in the county. Our coalition has some concerns and reservations due to currently unanswered questions about how congestion pricing is currently affecting our county and how the expansion of congestion pricing will impact our constituencies. Congestion pricing has equity challenges; any time you institute a toll for access you exclude low-income people that are unable to pay. Furthermore, viable alternatives for some essential trips such as work, school and medical appointments may not be available until better bus service is achieved. To mitigate these challenges, we should improve public transportation quality and make transit free before congestion pricing is actualized.</p> </li></ul>	<p>Metro is conducting a Comprehensive Pricing Study. The study goals are revenue, ridership, equity, security, and customer experience–, and will be considered against deliverability within the context of the near and long-term agency recovery from the COVID-19 pandemic.</p> <p>Metro is committed to building a World Class Bus system. Improvements planned for the system include those to enhance the customer experience, improve the system operations, and to provide reliable access to riders where and when they need to travel. We recognize that the transit system has lost ridership over the last several years and are committed to improving our bus service. Through our NextGen Bus Plan, Metro is redesigning our entire bus network and these changes will be implemented over the next 18 months. Working with local partners, Metro is exploring projects to improve bus speed and reliability in congested corridors. Additional efforts to improve customer experience, including safety and security, are underway as well.</p>

**Attachment C - LRTP Public Comment Reponse Matrix**

Agencies and Organizations

Org	#	Comment Received	Response
		<p>Although the LRTP has many ambitious goals to reduce congestion in the corridors, we question whether congestion pricing may just redirect traffic to other routes. We are concerned about the potential for pricing to redirect traffic to neighborhoods that already experience higher levels of pollution due to historical environmental racism. For example, the 110 freeway cuts through South Los Angeles and many low income communities. Presently, congestion on the 110 pushes traffic that would otherwise be on the freeway to the already polluted areas in our communities; congestion pricing may exacerbate this. Lastly, the Long Range Transportation Plan was released in the middle of the pandemic that we are currently suffering from in our region and world wide. It is irresponsible that the draft plan does not make mention of the effects that this has caused on its transit dependent citizens. We urge Metro to take into consideration our questions and concerns regarding the draft plan. Thank you.</p>	<p>Metro is exploring road pricing as an option for reducing congestion, while at the same time providing alternatives to driving. Our Traffic Reduction Study is currently studying several pricing mechanisms and complimentary mobility improvement in select candidate corridors; however, the specifics of the recommendations stemming from the study are unknown at the moment.</p>
Nature for All and Co-signatories	336	<p>Dear Fabian Gallardo and LA Metro Board of Directors; On behalf of the undersigned organizations, we would like to thank you for your work in developing the Long Range Transportation Plan at METRO LA and for the opportunity to provide comments on the Draft Plan released in May 2020. Since we work directly in park-poor communities and other underserved areas, we understand how lack of transportation to nature can negatively affect these communities' public health. Our goal is to ensure that priority is given to funding meaningful community access for those that need it most and, although we are pleased with the Draft, we offer the following recommendations to further amplify its potential for success:</p> <p>1. Adding a section on Metro's Transit to Parks Strategic Plan Our concerns along with our recommendations are explained in more detail in the comments below. Access to Parks As we all are aware, there is a lack of access to natural open spaces, particularly in underserved communities. Additionally, the current COVID pandemic has deepened our understanding that access to nature is vital and essential to improve the communities' overall public health. Metro recognized the opportunity to address this inequity with the adoption of the Transit to Parks Strategic Plan. Unfortunately, the Long Range Transportation Plan does not reflect this commitment to improving equity and the quality of the transit system. A lot of work and effort was put into Metro's Transit to Parks Strategic Plan, which presents a systematic vision for increasing access to parks and open space Countywide. We recommend adding the Metro Transit to Parks Strategic Plan as a strategy under Access to Opportunity, in order "to find targeted, holistic ways to increase access to parks and open spaces, especially for communities in need." We refer to this Strategic Plan as it provides recommendations on transit strategies and initiatives that link people to parks. In fact, the Transit to Parks Strategic Plan states its efforts would "inform the LRTP update by providing recommendations on transit strategies and initiatives that link people to parks. The LRTP will utilize performance metrics that may include those relating to access to parks and open space which can be informed by this Plan." Thus far, we have not seen this reflected in the LRTP, which we believe is the best opportunity to ensure investments are made in our communities to ensure overall public health through access to parks and open spaces.</p>	<p>Comment noted.</p> <p>This will be addressed in the final LRTP prior to adoption.</p>

**Attachment C - L RTP Public Comment Reponse Matrix**

Agencies and Organizations

Org	#	Comment Received	Response
		<p>2. Provide a more substantive examination of the strategies to be used to implement Complete Streets throughout the County</p> <p>Complete Streets- Active Transportation During the last few months of the COVID-19 pandemic, we have seen how a rapid shift in economic opportunities has had a dramatic impact on how our streets are used around LA County. With fewer cars on the road, more people than ever turned to walking and biking, which rapidly highlighted how much of LA County still struggles with inadequate human-centered road infrastructure. While we appreciate the efforts being made to provide off-street options, such as the Rail-to-Rail corridor and gap closure of the LA River Trail in Central LA, we believe that even more can be done to help provide access to economic and recreational opportunities to lower-income park-poor communities. Our key recommendation, with regards to Complete Streets, is to provide a more substantive examination of the strategies to be used to implement Complete Streets throughout the County. For example, a greater commitment by Metro to fund and implement Complete Street projects along economically sensitive corridors in low-income communities of color would be a welcome addition to the current narrative. Such changes would make biking and walking more welcome along these corridors, driving more slow traffic that helps support small businesses. In communities where sidewalk vending is a common driver of economic opportunity, a commitment by Metro to prioritize streetscape redesigns to ensure greater sidewalk space to improve mobility for pedestrians while allowing sufficient space for economic opportunity. These more specific types of commitments would demonstrate to our communities that Metro understands the potential impacts that Complete Streets can have on the larger growth of our communities.</p>	<p>Metro recognizes that active transportation is a vital component of the multi-modal transportation system. Bicycling and walking are important first and last mile modes to support the expansion of transit usage and offer their own public health and environmental benefits. The L RTP details several regionally significant major multiuse paths as well as the many policies and programs that Metro has established to support active transportation, complete streets, and first and last mile connectivity. Most investment decisions for active transportation happens within local jurisdictions, and therefore, Metro will work with our local partners to improve bicycle and pedestrian travel within LA County. Metro encourages stakeholders to provide your feedback directly to local and regional governments as well as to Metro on future planning efforts.</p>
	336	<p>3. Clarify how equity Focus Communities are being prioritized for investments</p> <p>Additionally, we recommend to Metro that in funding and installing infrastructure that aligns with the Complete Streets Policy to focus on those areas that have traditionally been underinvested and currently exhibit a lack of much needed infrastructure improvements. These communities are typically areas with the greatest need, but frequently receive the least investment, which means that they continue to lag further and further behind in access to opportunity unless deliberate efforts are made to acknowledge and close those gaps. Access to Opportunity We are impressed with some of the strategies in this section and we want to applaud Metro for trying to incorporate Equity into all of its efforts. We want to particularly uplift the discussion to support and work with Small Business throughout the development of all projects. We would like to request that you clarify some of these elements such as, how Equity Focus Communities are being prioritized for investments, and if Metro is employing any strategies beyond Joint Development Projects to realize inclusive Transit Oriented Communities. Additionally, we encourage Metro to state its goal that joint development projects contain at least 40% of the units for affordable housing. Conclusion We thank you again for your thoughtfulness in developing the Long Range Transportation Plan and for this valuable opportunity to submit comments and suggestions on them. Our organizations are excited to see Metro invest in promoting equitable transportation options. We look forward to your response and to be able to work with you on strengthening the implementation of this plan. If you should have any questions regarding this letter, please do not hesitate to contact any of the organizations listed below who can work with Metro to improve this Plan..</p> <p>Sincerely,            Amy Lethbridge Community Nature Connections, Eli Kaufman LA Bicycle Coalition, David Diaz Active SGV, Bryn Lindblad Climate Resolve, Belinda Faustinos Nature for All, Daniel Rossman The Wilderness Society, Christy Zamani Day One Pasadena</p>	<p>Addressing historical inequities is a guiding principle for the L RTP and a core tenet for Metro's current planning activities. Metro's Equity Platform will help guide future planning studies and investment decisions.</p>
MoveLA Coalition and Co-signatories	349	<p>On behalf of the undersigned organizations, we appreciate the incredible level of detail and public engagement conducted to develop Metro's Draft 2020 Long Range Transportation Plan. The Plan is both realistic and bold in a time of great uncertainty; realistic in its recognition of our looming fiscal challenges and bold in that the L RTP serves as a blueprint for a clean transportation driven recovery. In particular, we want to highlight the boldest policies: • Free Transit for all • Faster, More Frequent Bus Trips • Congestion Pricing • Bus-Only Lanes • First/Last Mile Program • Freight Management Policies • TOC &amp; Complete Streets Policies and providing more affordable housing • Accessible Wayfinding Pilot • Zero-emission bus fleet The scenario models show the transformation of transportation in the region if we implement these bold policies equitably. We also appreciate Metro defining Equity Focused Communities and look forward to developing and advancing a "Racial and Socio-Economic Equity Action Plan."</p>	<p>Comment noted.</p>



**Attachment C - LRTP Public Comment Reponse Matrix**

Agencies and Organizations

Org	#	Comment Received	Response
	350	1. Integrating the recently-passed guidelines to expand highway program eligibility to transit, active transportation, and complete streets improvements (File #2020-0412) to re-orient spending towards the most under-resourced modes (Strategies 2.1 and 3.1a.-c.).	The LRTP's investment plan is built upon previous efforts and the Metro Board's previous directives. The Measure M expenditure plan was developed with significant public input and was passed by over 70% of LA County voters, and much of the funding allocated for projects and programs included in the LRTP was written into the Measure M statute. It is important for Metro to support all modes while emphasizing our commitment to transit and sustainable transportation options; however, there will be additional opportunities to influence future investment decisions. Local jurisdictions receive funding in the form of "Local Return" and most subregions receive funding through "Multi-year Subregional Programs", which can be used for a variety of project types. Metro encourages stakeholders to provide your feedback directly to local and regional governments as well as to Metro on future planning efforts. The Short Range Transportation Plan, to be completed following the LRTP, will re-evaluate the financial realities facing LA County over the next decade and will provide an opportunity for Metro and our partners to examine the prioritization of funding.
	351	2. Funding accessibility (1.6b.) with a more holistic approach on all modes (bus, rail, and active transportation) that addresses the needs of those with physical, visual, auditory, and/or mental disabilities or impairments so that these riders feel welcome throughout the Metro system.	Metro is committed to building a World Class Bus system. Improvements planned for the system include those to enhance the customer experience, improve the system operations, and to provide reliable access to riders where and when they need to travel. We recognize that the transit system has lost ridership over the last several years and are committed to improving our bus service. Through our NextGen Bus Plan, Metro is redesigning our entire bus network and these changes will be implemented over the next 18 months. Working with local partners, Metro is exploring projects to improve bus speed and reliability in congested corridors. Additional efforts to improve customer experience, including safety and security, are underway as well.
	351	2. Funding accessibility (1.6b.) with a more holistic approach on all modes (bus, rail, and active transportation) that addresses the needs of those with physical, visual, auditory, and/or mental disabilities or impairments so that these riders feel welcome throughout the Metro system.	Thank you for the comment. Metro is committed to providing safe and accessible services for all users.
	352	3. Prioritizing projects that were scheduled for completion last decade before new projects are started, and ensure equity and racial justice goals are used in assessing which projects start next. Specifically, the Rail to River Active Transportation (3.3b.) and Crenshaw Line projects were scheduled to open in 2019 and 2020 respectively, and are both far behind schedule.	The LRTP is the 30-year plan for Los Angeles County. The near-term strategies and actions are to be determined and will be documented in the Short-Range Transportation Plan (SRTP). The LRTP is a living document that will be amended as necessary as the county's priorities change and as financial, technological, or demographic changes warrant updates to the plan. The new financial realities facing LA Metro will be explored extensively over the next several years and will be documented in the SRTP. The LRTP includes a new discussion of the COVID-19 pandemic and the variety of impacts it has on the contents of the LRTP.
	353	4. Scaling the LIFE, Youth on the Move, and U-Pass Program (strategies 4.3a.-c.) to achieve free or deeply discounted fares quickly for those in need and makes it easier to reach the goal of free fares for all. (4.3e.)	Metro is conducting a Comprehensive Pricing Study. The study goals are revenue, ridership, equity, security, and customer experience-, and will be considered against deliverability within the context of the near and long-term agency recovery from the COVID-19 pandemic.
	354	5. Integrating the Bus Rapid Transit strategy (1.2h.-i.) with the Transit Oriented Communities strategy (4.2). Metro's own Climate Action and Adaptation Plan (2019) indicates that the greatest reductions in VMT and GHG will come from land use decisions. Therefore, aggressively pursuing affordable housing that respects and does not displace existing residents near proposed BRT and rail lines is critical to achieving the region's aggressive climate change goals.	Metro is committed to addressing working with local partners to address the housing shortages facing our region. Through our Joint Development Program on Metro-owned land, and through our Transit Oriented Communities program, we'll seek to create new housing around transit and will encourage transit-supportive land use policy.
	355	6. Actively engage in local development and land use decision-making processes to protect Metro's interests in fulfilling LRTP goals, including the use of lawsuits and amicii briefs to enforce VMT mitigation requirements under the California Environmental Quality Act. (4.2)	Sustainability is a guiding principle in this LRTP and a foundational element of our activities. Metro believes that environmental sustainability should carry through to each project, program, and policy. The LRTP details several specific strategies to address sustainability and our new report that will be published soon, Moving Beyond Sustainability, provides greater detail on how Metro will lead in sustainability.
	356	7. Commit to assisting, encouraging, and eventually requiring contractors to use zero and near-zero emission construction equipment in addition to renewable diesel. (3.5a.)	Sustainability is a guiding principle in this LRTP and a foundational element of our activities. Metro believes that environmental sustainability should carry through to each project, program, and policy. The LRTP details several specific strategies to address sustainability and our new report that will be published soon, Moving Beyond Sustainability, provides greater detail on how Metro will lead in sustainability.
	357	8. Identify strategies and funding to enhance station areas to make them cleaner (sanitizing stations, mask dispensing, physical distancing), safer, more accessible for people of all abilities, and more welcoming (Strategy 1.4).	Metro is committed to building a World Class Bus system. Improvements planned for the system include those to enhance the customer experience, improve the system operations, and to provide reliable access to riders where and when they need to travel. We recognize that the transit system has lost ridership over the last several years and are committed to improving our bus service. Through our NextGen Bus Plan, Metro is redesigning our entire bus network and these changes will be implemented over the next 18 months. Working with local partners, Metro is exploring projects to improve bus speed and reliability in congested corridors. Additional efforts to improve customer experience, including safety and security, are underway as well.

**Attachment C - LRTP Public Comment Reponse Matrix**

Agencies and Organizations

Org	#	Comment Received	Response
			<p>The LRTP was developed prior to the onset of the COVID-19 pandemic. The LRTP will include a new discussion of the COVID-19 pandemic and the variety of impacts it has on the contents of the LRTP, including the impacts on Metro's financials, operations, and other efforts. The LRTP is the 30-year plan for Los Angeles County. The near-term strategies and actions are to be determined and will be documented in the Short-Range Transportation Plan (SRTTP). The LRTP is a living document that will be amended as necessary as the county's priorities change and as financial, technological, or demographic changes warrant updates to the plan. The LRTP will include a new discussion of the COVID-19 pandemic and the variety of impacts it has on the contents of the LRTP. The new financial realities facing LA Metro will be explored extensively over the next several years and will be documented in the SRTTP.</p>
	358	<p>9. As Metro considers its policing model and resource allocation, creating a safe space for riders is critical to the success of the system. This means dis-investing from Strategy 1.7b., d., and f. (Multi-Agency Policing Plan) and investing in Strategies 1.7a. and c. (Transit Homeless Action Plan, Sexual Harassment Plan) and creating a new "alternatives to policing" strategy.</p>	<p>In March of 2017, Metro Transit Security entered into a five-year contract with three police agencies to further support security on bus and rail lines across Metro's transit system. That same year, Metro launched the use of a multi-agency approach to patrol LA County's 88 cities. This new policing structure includes the Los Angeles County Sheriff's Department, Los Angeles City Police Department, and Long Beach Police Department. Our partnership increases the "felt presence" of officers riding our buses and trains to deter crime and give riders and employees more assurance that they can ride the system safely. Metro remains committed to retaining the confidence of its transit customers, who depend on a safe, secure transit system for their daily transportation needs.</p> <p>In spring 2016, at the direction of our CEO, Metro created a Homeless Task Force to address homelessness in and around the transit system and align action with County and City of Los Angeles priorities. In February 2017, the Homeless Action Plan was finalized. The Action Plan's goals are threefold: 1. to enhance the customer experience; 2. maintain a safe and secure system; and, 3. connect homeless persons in the transit system to services and resources under Measures H and HHH. Metro continues to expand efforts in this area.</p>
	359	<p>10. Coordinating with and incentivizing cities to implement their active transportation plans using eligible dollars and leveraging state funding to implement first/last mile and complete streets programs (Strategies 3.1 and 3.2).</p>	<p>Metro recognizes that active transportation is a vital component of the multi-modal transportation system. Bicycling and walking are important first and last mile modes to support the expansion of transit usage and offer their own public health and environmental benefits. The LRTP details several regionally significant major multiuse paths as well as the many policies and programs that Metro has established to support active transportation, complete streets, and first and last mile connectivity. Most investment decisions for active transportation happens within local jurisdictions, and therefore, Metro will work with our local partners to improve bicycle and pedestrian travel within LA County. Metro encourages stakeholders to provide your feedback directly to local and regional governments as well as to Metro on future planning efforts.</p> <p>Metro coordinates with and supports our local, regional, and state partners. We cannot address all the transportation challenges facing LA County alone and we rely on the help of our partners. We look forward to continued collaboration to advance our vision for LA County.</p>

**Attachment C - LRTP Public Comment Reponse Matrix**

Agencies and Organizations

Org	#	Comment Received	Response
Sherman Oaks Home-owners Assoc.	40	The information concerning the Sepulveda Transit Corridor Project on page20 of Metro’s draft 2020 Long-Range Transportation Plan, Our Next LA, is inconsistent with MeasureM and other Metro information concerning the project. The Sherman Oaks Homeowners Association (SOHA) requests Metro to check the information and bring it into consistency with MeasureM and other information.The draft LRTP uses nomenclature about Sepulveda Transit Corridor Project phases that is inconsistent with other Metro information. To date, Metro information and MeasureM (AttachmentA)have defined Phase1 as high-occupancy toll lanes through the Pass, Phase 2 as the Valley to Westside, and Phase3 as the Westside to LAX. The draft LRTP (page20) lists Phase1 as the Valley to Westside and Phase 2 as the Westside to LAX. These are inconsistent and confusing to the public. LRTP page20 also shows the Westside to LAX “investment” as \$10,587 million. MeasureM, AttachmentA lists the Phase 3 Westwood to LAX budget as \$3,865 million. It appears that the draft LRTP incorrectly lists the total Sepulveda Transit Corridor Project budget for the Westside to LAX, rather thanthe actual budgetfor the Westwood-to-LAX phase.Thank you.Sincerely,	We are reviewing all project details, including the available funding, the project cost, and the opening year in advance of the adoption of the LRTP. We will share this comment with the appropriate project team.
Oso/Neenach Town Council	325	<p>Long Range Planning for State Route 138 Dear Sirs,</p> <p>As the President of the Oso/Neenach Town Council I have submitted numerous comments and concerns to NCTC that need to be addressed in the Long Range Planning Report for State Route 138 in the western Antelope Valley. Public safety has been our number one concern with regard to high speed vehicle accidents that are oftentimes created by reckless drivers with poor driving attitudes, who try to pass on the two lane highway at high rates of speed. Even with the recent paving improvements, the roadway needs to be expanded to prevent future head on collisions. There are currently no passing lanes on State Route 138 from Interstate 5 to the 14 freeway; many anxious drivers try to pass on the two lane highway in the 55 MPH speed zones often resulting in head on collisions, several that have had fatal consequences. There have been a series of accidents at key intersections that desperately need turn lanes and traffic calming, 300 Street West,Three Points Road, La Petite, 245 Street west, 150 street west, 110 street west, 90 street west and 60 street west all would benefit with turn lanes and traffic calming. A series of wildlife under crossings need to be considered, possibly using larger than average drainage pipes to allow wildlife to have free access to either side of the highway and not to interfere with interconnectivity of the Tejon Ranch, Angeles National Forest and Transitions Habitat region that connect Highway 14 to Interstate 5. We are grateful for the new paving improvements, however vehicles are still passing at very high rates of speed, this month alone we had a fiery crash at 60 Street west involving three vehicles and two overturned vehicles at 300 street west. These all appeared to be very high speed accidents involving serious bodily injury.</p>	The scope, design, schedule, and phases of specific projects are not addressed in the LRTP. These elements will be addressed during the environmental planning phase of the project development and there will be additional opportunities to contribute feedback at that time. We will pass along this comment to the project team and we encourage you to provide additional project-specific feedback at: <a href="http://www.metro.net/projects">www.metro.net/projects</a> .
		<p>The Highway 138 corridor runs through a very scenic area of poppies and and open space, we would love to see the shoulders hydroseeded with native poppy mix after construction. With some intensive and creative work, planners for the Highway 138 project should consider designating this area as a scenic highway if care and forethought are given to this massive project. We would also recommend flood control to be examined in order to improve drainage along the highway where routine seasonal flooding occurs. Noise is somewhat of a concern as well so sound attenuating walls may be needed where appropriate. Of great concern is the sweeping bend near Quail Lake at the very close proximity to Mr. Carl and Kathy Stogaard's residence. There have been numerous accidents at this location with vehicles going through the chain link fencing. The rumple strip in front of Carl and Kathy's home makes for very noisy conditions since the home is less than 150 feet off the highway. Please note that improvements are needed for vehicles entering the La Petite and Three Points Roads neighborhoods, I believe on and off ramps were discussed in the primary outreach /scoping meetings. We hope that you will work with the Three Points and Oso/ Neenach Town Councils to address this area of concern. We are very appreciative of Metro accepting our recommendations for highway safety improvements along State Route 138. The Town Council and local residents are willing to work with Metro, Cal trans and LA County officials to improve highway safety in order to prevent needless collisions, improve traffic flow and beautify the area. For post collision incidents, I hope that Metro and LA County Fire Department will work cooperatively to enhance the trauma care delivery system in the rural areas with immediate dispatch of a paramedic helicopter and that units in the area are properly equipped and funded with modern rescue tools to allow for quick extrication. I have asked Denise Shippy, our Public Safety Outreach Coordinator to follow up with your office and to ask other community members for letters of support for this project. Respectfully Submitted, Jeff Zimmerman President Oso/Neenach Town Council</p>	

**Attachment C - LRTP Public Comment Reponse Matrix**

Agencies and Organizations

Org	#	Comment Received	Response
Westwood South of Santa Monica Blvd Home-owners Assoc.	337	<p>WESTWOOD SOUTH OF SANTA MONICA BLVD. HOMEOWNERS ASSOCIATION PO Box 64213 Los Angeles, CA 90064 RE: METRO LONG RANGE PLAN COMMENTS We have reviewed the Long Range Plan (LRP) posted by Metro referred to as "Our Next LA" and wish to submit some comments for your consideration. We appreciate the opportunity to do so and trust that you will receive a wide range of input for consideration in drafting the final plan.</p> <p>First: It is unfortunate that the timing of this plan coincides with the current Coronavirus pandemic. This experience will, no doubt, have an impact on how people live, how they work and how they travel. It remains to be seen as which changes now being seen will be permanent and which are of a more temporary nature. However, one thing is certain: the pandemic will change behaviors previously assumed to be "the way things are." Those things can no longer be assumed to be a part of our reality and, unfortunately, this long range plan was written with pre-pandemic assumptions. How will Metro take these changes into account in the final plan?</p>	<p>The LRTP was developed prior to the onset of the COVID-19 pandemic. The LRTP will include a new discussion of the COVID-19 pandemic and the variety of impacts it has on the contents of the LRTP, including the impacts on Metro's financials, operations, and other efforts. The LRTP is the 30-year plan for Los Angeles County. The near-term strategies and actions are to be determined and will be documented in the Short-Range Transportation Plan (SRTTP). The LRTP is a living document that will be amended as necessary as the county's priorities change and as financial, technological, or demographic changes warrant updates to the plan. The LRTP will include a new discussion of the COVID-19 pandemic and the variety of impacts it has on the contents of the LRTP. The new financial realities facing LA Metro will be explored extensively over the next several years and will be documented in the SRTTP.</p>
		<p>The challenge of reducing congestion in the region may have been reduced somewhat as a result of impacts of the pandemic. Many employers have transitioned to having their employees work from home. While they may not continue with staff working away from the office at all times, the shift in culture has transpired and will have continued noticeable impacts on travel here and elsewhere. We often make reference to the reduced congestion in the LA metropolitan area when the Olympic games were last here. That was the result of slight shifts in work hours and in some residents leaving the area during the games. What will the impact be (percent?) of those who will continue to work from home part time? full time? How will this affect congestion? How will this affect transit ridership? We must also remember that the use of VMT to measure transportation impacts is a new measure that is untested and may not fully document the impact of changes in transportation policy. It would be advisable to continue to measure intersection congestion in addition to VMT to take advantage of the historical record of intersection analysis recording in many EIR documents. There are some who believe that while VMT may be reduced in certain locations, at the same time (and in the same area), congestion may increase (which will have an impact on increasing GHG). Regardless of how trips and travel are documented, highway investments must continue because the highways provide the routes needed not only for commuters, but for transit and goods movement and for too long, our freeways and roadways suffered and were not adequately maintained. Express lanes are an important offering to prioritize passage of transit buses and carpools on our freeways. However, they must be used to facilitate travel rather than being viewed as revenue enhancement tools. The freeways were built with taxpayer monies and it is not difficult to see public support for future roadway or transit measures undermined should projects funded with taxpayer dollars be reserved for the wealthy who can buy their way out of congestion.</p>	<p>The LRTP's investment plan is built upon previous efforts and the Metro Board's previous directives. The Measure M expenditure plan was developed with significant public input and was passed by over 70% of LA County voters, and much of the funding allocated for projects and programs included in the LRTP was written into the Measure M statute. Metro must balance environmental sustainability and equity imperatives with the realism that our roadway transportation system is still crucially important for regional mobility.</p>
		<p>It is a terrible frustration for drivers to see empty express or hot lanes when stuck in traffic and while it makes sense to maintain flow on Express Lanes at 45 mph, limiting their access at times when, for example, traffic is halted on the adjacent freeway as a result of an accident or roadway construction seems less than ideal. Variable pricing at times of congestion means that the wealthy will travel more quickly and that we will have a two tier system of travel on our public roadways. Providing financial aid to low income users will not help and will only serve to alienate working middle class members of the community -- whose tax dollars support transit operation. The "pilot traffic reduction program" mentioned in the LRP is meant to reduce congestion and raise funds for other Metro priorities (such as providing free transit for students). Many are familiar with the congestion pricing program in London, England and fear that any attempts to draw a comparison between Los Angeles, London and any other metro area that utilizes congestion pricing is an invalid and dangerous one. Los Angeles still does not have a transit network that provides coverage throughout the region for those who would like to utilize transit. There are holes in basic accessibility between, for example, the San Fernando Valley and the city over the Sepulveda Pass. The LA metropolitan region is divided by a mountain range (the Santa Monica Mountains) and there are few north-south arterials available for travel. We have numerous residents living in hillside areas -- areas that will never have the kinds of population density to warrant service by transit. (The use of Uber and Lyft as an alternative does not (necessarily) reduce traffic congestion as has been documented in a San Francisco study and which mirrors the experience of users here.</p>	<p>Metro is exploring road pricing as an option for reducing congestion, while at the same time providing alternatives to driving. Our Traffic Reduction Study is currently studying several pricing mechanisms and complimentary mobility improvement in select candidate corridors; however, the specifics of the recommendations stemming from the study are unknown at the moment.</p>

**Attachment C - LRTP Public Comment Reponse Matrix**

Agencies and Organizations

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		<p>The ability to avoid travel during peak travel periods is not often under the control of a driver. There are jobs that must start at a specific time. To punish workers by assessing them a tax to use the street to access their job is not equitable -- whether a lower or higher wage earner. Those employees work and pay taxes and have invested in the roadways. There are many jobs that REQUIRE a vehicle. Think about gardeners, construction workers and those who must carry equipment with them to perform their job. What is the soccer coach to do about carrying the bag of balls and goal posts needed for a practice in the park? What does the gardener do to reach a series of homes in or beyond an area of congestion pricing. Proposing to subsidize the tolls of some at the expense of other users is certain to raise an uproar and compromise the credibility of Metro. Transit is not meant to be a wealth transfer mechanism. We are aware of the SCAG study which looks at the implementation of a congestion pricing pilot program in West Los Angeles going west from the 405 to approximately 20th Street, and from the 10 Freeway north to just above Sunset Blvd. I do not believe that this is a good choice for a pilot program for the following reasons: --There are many medical providers in that area and others that cannot be reached without entry into the proposed congestion zone. St. John's Hospital and UCLA -Santa Monica Hospital Medical Center and their associated physician offices are located in or adjacent to the proposed congestion zone. As is well recognized, these types of facilities are noted as traffic generators as compared to other types of land use. Seniors, the ill, new parents, etc. must often make frequent visits to their medical care facilities and appointments are scheduled throughout the day. It would be impossible to schedule appointments outside of peak travel hours for there aren't enough off-peak hours in a day to accommodate the need. It would be wrong to invent a new barrier to health care access for those for whom congestion pricing would be a financial burden. --What would be the impact on small business in the area? Metro claims to support small business yet reducing access is sure to have an effect on patronage.</p> <p>Small business is not only the retail business on a commercial corridor, but it is also the service providers who work in the pilot area or beyond it. Many drivers prefer to travel on city streets and will not use the freeway (which could serve as an alternative for getting around the zone if one seeks to go beyond it via freeway) (but then what would the impact be on freeway congestion during work access hours?). --Some jobs require those performing the work to drive during peak hours and to carry supplies such that they are unable to utilize transit. This program would penalize and punish those individuals. --The Westside has only recently received the EXPO Light Rail Line and the "Subway to the Sea" will likely never actually GO to the sea. The Westside has not been particularly well "gifted" with transit investments. Our area attracts both jobs and housing development for many reasons. The residents and workers who live in or come into the area regularly, should not be punished or penalized for their presence here. Many who purchased properties here many years ago many be viewed as wealthy and able to pay a toll but that may not be the case. Some are property rich and otherwise working hard to maintain their residence. Many who live on the Westside live in rent-controlled apartments. Many are unable to utilize transit -- whether due to lack of reasonable access, health reasons, job requirements, etc. --While the presence of the elevated 405/San Diego Freeway is a physical barrier to traffic at peak hours (particularly in evening commute times when travel from west to east is especially difficult), the freeway does not sever the relationship of those living on the east side from those on the west side. The two sides make up "West Los Angeles." We share zip codes (90025), frequent shops and services on both sides of the 405 and travel between the areas. Many have family across the 405. It would seem to be a far better strategy for creating new incentives to moving trips that cannot be taken by transit to off-peak hours (free transit fare in off-peak times?) than to penalize those who have little to no choice and to create a complicated system of financial reimbursements to those for whom travel during those times is necessary.</p>	

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		<p>The initial study on a Westside congestion zone was done PRE-COVID-19. It may be necessary to revisit the entire project and to re-evaluate traffic and travel patterns prior to identifying any pilot location. As the majority of transit investments have taken place downtown where the EXPO Line, Blue Line, Gold Line and Metro Link all converge, it was somewhat of a surprise to me that a pilot would be proposed anywhere else than downtown Los Angeles.... especially as the Downtown Connector is soon to be completed. Congestion pricing is most often seen in central city locations. What would be the reason why a congestion pricing pilot would not be done downtown if it is to be pursued at all? Having directly participated in negotiations over project entitlements for developments in Century City, we can attest to the fact that although many buildings were required to have TDM programs, too many of these plans were merely on paper -- perhaps complying via a reporting mechanism but not functioning as they should. We have had first-hand experience talking with employees in large buildings who did not understand what might be offered via their building's TDM. It struck us as quite odd (and ridiculous) that we, as a local homeowner association (HOA) board, would have to insist upon provisions in a proposed project that would expand the offerings and utility of a TDM program. It was our HOA that sought the establishment of a Transit Management Organization (TMO) for Century City when a large project was proposed in the area. We knew that the TDM's were not all functioning and we also knew that to have a critical mass of riders in vanpools, etc., there would need to be coordination between buildings in Century City. Why did that fall to our HOA? While we were successful in getting a commitment for the seed money for the TMO and to get leadership/staffing for it, we likely will not have such leverage in the future as more and more projects are approved "by right" and without the opportunity for local citizens to seek project improvements and community betterments. Therefore, it will be up to Metro and the City of Los Angeles to look more critically at whether these mechanisms such as the TDM program, TMOs, etc. are working and working to their full ability to produce positive impact. In the absence of community input, there must be a way to have a maximum number of incentives for transit use provided to employees in new developments as well as to RESIDENTS that live in buildings that were awarded <u>added densities due to their proximity to transit</u>.</p>	
		<p>As our area is located in a community that has a number of bus lines and is served by both the Westwood Blvd. and Sepulveda Blvd. EXPO Light Rail stops, we have experience with the review of Transit Oriented Community projects (TOC) and the impacts of the implementation of transit related density bonuses. Active transportation investments where dedicated bike facilities separate from City streets should be a high priority. Placing bike facilities on busy arterials is dangerous. Removing traffic lanes on busy arterials for bicycles is not often a wise choice; some streets are needed to move traffic. The intentional slowing of traffic on major arterials has unintended negative consequences with increased cut-through traffic in residential neighborhoods where pedestrians and bicycles should be able to travel safely. The development and successful maintenance of complete streets is more difficult than is being acknowledged. To have a pedestrian friendly streetscape there must be land use policy that encourages a mix of uses not only mixing residential and retail/community serving services, but also a mix of different ground floor uses. This is key to having and to building a healthy community. There must be a mix of uses to service the growing density in our neighborhoods. However, current land use and development policies do not necessarily foster this mix.</p>	<p>Metro is committed to addressing working with local partners to address the housing shortages facing our region. Through our Joint Development Program on Metro-owned land, and through our Transit Oriented Communities program, we'll seek to create new housing around transit and will encourage transit-supportive land use policy.</p>
		<p>Metro claims to have a policy that supports small businesses. However, this policy which consists of business interruption funding and a business service center (for use during construction) is superficial at best. A small business may survive transit construction with that help, but as soon as construction is over, many small businesses will find that because of newly granted density bonus opportunities for property owners, these businesses will find themselves without a new lease and/or evicted to make way for a larger density bonus / TOC project. There are no provisions for alternative locations during construction, no promises of a return to the previous location. So, you have businesses that suffered through construction only to lose their place of business not long after construction has ended. This not only kills a local business or service, but it tends to destabilize the neighborhood and the local business community. Property owners who receive density bonus entitlements should have a responsibility to the community in exchange for their enhanced land use value by virtue of the fact that they are near transit. Speaking of enhanced land use value: The rezoning of land near transit serves to increase the value of that land. Not only have we seen small businesses lose their places of business because of large hikes in rent, but as the rents increase in the area this affects properties both residential and commercial. The cost of land increases and is reflected in what is built and how much the final product costs. The rezoning and transit-adjacent strategy for development has caused accelerated inflation of land costs. In the Westside, this has harmed many. This accelerates and causes gentrification citywide. It should also be noted that the heavy prioritization of construction of housing and upzoning for housing near transit is undermining the need to provide land for both housing AND jobs.</p>	



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		<p>If, in the rush to incentivize housing, we lose land needed for jobs, we will have undermined the creation of balanced communities that provide both housing and job opportunities. If we truly wish to reduce the need to travel, then we must have jobs in close proximity to housing. In our community, we lost valuable light industrially zoned land adjacent to the 405 Freeway to a large housing development (contrary to the zoning, general plan, and community plan designations for that land). Complete streets need to be part of complete communities. Creating situations where residents must travel distance to obtain a needed service or product is short-sighted. Rather than create artificial land rushes in a small area around transit, it would seem wise to instead concentrate on creating ways to get people to transit -- in a larger area. Projects built on Metro land should comply with all local zoning and land use policies and be respectful of the neighborhoods in which they are located. We are concerned that many citizens appear unaware of the opportunity to submit comments on this plan. The pandemic has made outreach more difficult --- particularly with those citizens who do not regularly rely on internet communications for their community news. You may wish to consider an extended outreach period, perhaps after making revisions that take into account potential impacts of the Coronavirus pandemic. We trust that efforts will be made to measure progress toward stated goals all along the path of implementation of the final plan so that unintended consequences can be identified, and changes made as/if needed. Thank you, Barbara Broide, President Westwood South of Santa Monica Blvd. Homeowners Association (WSSM) WSSM represents single family and condominium homeowners in the area between Santa Monica and Pico Blvds., and between Beverly Glen and Sepulveda Blvds. in West Los Angeles.</p>	

## Attachment C – LRTP Public Comment Response Matrix

### Public Comments

Name	#	Comment Received	Response
Andrew	1	Stop funding projects based on what subregion they are in. This is an outdated way of thinking once the system has expanded. For example, a project in the center of the city (like Crenshaw North) doesn't just help the Center City, but also adds connectivity for people on the West Side, South Bay, Inglewood, Valley and the East Side. Now that lots of outer parts of LA County have rail connections to the Central part of LA, we need to increase the number of projects in Central LA so that the rail projects in the outer parts of LA can connect to those. Metro needs to understand that projects in Central LA benefit ALL subregions and allocate funding accordingly. Central LA projects have a multiplier effect because they can connect with multiple existing projects, so they should be prioritized.	<p>The LRTP is a regional plan for mobility throughout LA County. The project prioritization process included as part of Measure M compared the benefits of highway and transit projects relative to each other. This comparison included systemwide impacts; network impacts and benefits to other areas beyond the project's scope were included in the prioritization process. However, providing benefits to each subregion within LA County is an important goal for Metro. Therefore, overall project performance and subregional equity are balanced in the LRTP's investment plan. The Short Range Transportation Plan, to be completed following the LRTP, will re-evaluate the financial realities facing LA County over the next decade and will provide an opportunity for Metro and our partners to examine the prioritization of funding.</p>
	2	The following rail projects should be prioritized: Crenshaw Northern Extension, a rail line from Downtown to the West Side following Santa Monica Blvd., the Sepulveda Line and an extension of the Purple Line to the beach. These projects should be prioritized because they help out the entire LA Metro area by adding to overall connectivity. For example, the Crenshaw extension doesn't just help people in the center of the city, but it helps add connectivity for people in the South Bay,	
	3	Cut highway funding and re-direct it to rail and bus infrastructure. Need more bus-only lanes that are physically separated from regular traffic lanes as well as effective on-bus cameras to increase enforcement. Increase separated bus lanes without the need to do an environmental review, as environmental reviews just add costs and time delays to the project.	
Harold	5	I love LA mobility solutions.	Comment noted.
Nancy	7	Is there Going to Be Officers around for the station ?	<p>In March of 2017, Metro Transit Security entered into a five-year contract with three police agencies to further support security on bus and rail lines across Metro's transit system. That same year, Metro launched the use of a multi-agency approach to patrol LA County's 88 cities. This new policing structure includes the Los Angeles County Sheriff's Department, Los Angeles City Police Department, and Long Beach Police Department. Our partnership increases the "felt presence" of officers riding our buses and trains to deter crime and give riders and employees more assurance that they can ride the system safely. Metro remains committed to retaining the confidence of its transit customers, who depend on a safe, secure transit system for their daily transportation needs.</p>

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Ken	8	Like most of LA's transit plans, this seems to focus only on getting people in and out of Downtown. LA is not a centralized city; most of us do not need to get to downtown. North-south arterials that connect multiple transit lines are ignored, keeping people like me from utilizing public transit. With the amount of traffic on the 605, and the fact that it passes over 2 current and 1 proposed light rail line as well as Metrolink lines, why is there no talk of either a rail line or an express bus route (like the Silver line) that follows the 605 and connects these lines? This would give those of us who work in areas other than downtown a much needed transit option and provide a viable transit option to anyone working in the cities surrounding the 210. The eastern side of LA county is woefully short of transit options for anyone not working in downtown. Please consider giving all of us another option.	The LRTP is a regional plan for mobility throughout LA County. The project prioritization process included as part of Measure M compared the benefits of highway and transit projects relative to each other. This comparison included systemwide impacts; network impacts and benefits to other areas beyond the project's scope were included in the prioritization process. However, providing benefits to each subregion within LA County is an important goal for Metro. Therefore, overall project performance and subregional equity are balanced in the LRTP's investment plan. The Short Range Transportation Plan, to be completed following the LRTP, will re-evaluate the financial realities facing LA County over the next decade and will provide an opportunity for Metro and our partners to examine the prioritization of funding.
Helen	9	I'm 100% for expanding Metro's rail system, creating bus-only lanes, and creating more bike and pedestrian paths. Honestly, I cannot express enough enthusiastic support for these goals, especially safe pathways for nonmotorized travel. Alhambra has ZERO bike paths!	Comment noted.
William	13	Every penny not spent on security will cost you millions in lost ridership. There is no secret sauce, no mystery and you know it already.No one wants to sit in a puddle of urine, step over trash that increased once the PA announcements started about that "extra special cleaning" when it should have happened all along and to deal with fare jumpers who antagonize riders and are disruptive. Most people just want to get to work and get home. Every complaint response from your organization makes excuses ("alternative living"). Enforce fares. Provide free passes to those in financial need with legitimate need such as education, welfare-to-work or similar thru outreach and suspend if they aren't properly use (put their picture on the TAP card).It is highly dangerous. Most light rail security hang out at Union Station or 7th & Metro. 2-4-man teams should be given a geographic region (3-4 Metro stops) and be stepping on and off trains, checking (enforcing) fares and be highly visible. Put them in bright green vests. Be visible. Be unpredictable. And for Pete's sake, stop the PA announcements. We will know when you remain visible. Your pattern is to do something (fare enforcement) one or two days then disappear for months. Go watch your platform and car videos and see anything that shows otherwise. After having been a daily rider for years, no desire to go back to a broken system.	In March of 2017, Metro Transit Security entered into a five-year contract with three police agencies to further support security on bus and rail lines across Metro's transit system. That same year, Metro launched the use of a multi-agency approach to patrol LA County's 88 cities. This new policing structure includes the Los Angeles County Sheriff's Department, Los Angeles City Police Department, and Long Beach Police Department. Our partnership increases the "felt presence" of officers riding our buses and trains to deter crime and give riders and employees more assurance that they can ride the system safely. Metro remains committed to retaining the confidence of its transit customers, who depend on a safe, secure transit system for their daily transportation needs.
Donald	16	When you're building the WSAB line it should go west on the Slauson RO.W and terminate at the CRENSHAW LINE Lincoln Heights station	The final alignment and station location for rail projects included in the LRTP are subject to change during the environmental planning phase of the project development. We will pass along this comment to the project team and we encourage you to provide additional project-specific feedback at: <a href="http://www.metro.net/projects">www.metro.net/projects</a> .

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David	18	Your overall goal of making the public transit experience as good as private is the correct one. Private compartments with plush cushioned seating, music, soundproofing, so two can people can talk to each other without bothering others, no homeless or separate cars for homeless (they smell bad) build the transit lines above the highways so the transit has fresh air, light and views, and the highways are dark tunnels. Make the transit go all the way to destinations, instead of part way (for example, at Dodger Stadium and Santa Monica Beach, the transit stops short of the destination) Double the number of tracks, so you can have express trains that go end to end with only one stop, and a local trains that stop at every station. Simplify the Transit Homeless Action Plan. It has 18 goals, which are then expanded to 64 separate bullet points. 64 separate goals. That's ridiculous. Instead of expanding the process, making it more complex, you need to do the opposite - compress it, simplify it, pick 3 or 4 goals and figure out how to actually accomplish them. Homeless people on trains ruins the experience for everyone else. Their smell gets on you and now you smell, and you lose your friends and your job. It has to be fixed, now, not made into a complex, multi-dimensional 10-year project. The plan was devised more than 3 years ago and the situation has gotten worse, so obviously you need a better plan.	<p>In spring 2016, at the direction of our CEO, Metro created a Homeless Task Force to address homelessness in and around the transit system and align action with County and City of Los Angeles priorities. In February 2017, the Homeless Action Plan was finalized. The Action Plan's goals are threefold: 1. to enhance the customer experience; 2. maintain a safe and secure system; and, 3. connect homeless persons in the transit system to services and resources under Measures H and HHH. Metro continues to expand efforts in this area.</p> <p>Metro is committed to building a World Class Bus system. Improvements planned for the system include those to enhance the customer experience, improve the system operations, and to provide reliable access to riders where and when they need to travel. We recognize that the transit system has lost ridership over the last several years and are committed to improving our bus service. Through our NextGen Bus Plan, Metro is redesigning our entire bus network and these changes will be implemented over the next 18 months. Working with local partners, Metro is exploring projects to improve bus speed and reliability in congested corridors. Additional efforts to improve customer experience, including safety and security, are underway as well.</p>
Parker	20	Hi, I don't drive and I really enjoy taking the Metro rail or bus, although there are improvements that could be made. I also have started biking as my main means of transportation. I am trying to look up information on what the plan for LA's bike infrastructure is. It is a little hard to find information, and the info that I have found can be a little underwhelming. I enjoy seeing about plans for recreation biking, like the plan for the LA river, but I would really like to see more being done for biking around the city as a means of serious transportation. I live in East Hollywood. I am extremely glad that Sunset has a bike lane for when I head downtown to work although I do not fully understand what makes a bike lane start and stop without getting all the way between to major points. Going nearly any other directions leaves a lot to be desired. Fountain is "bike friendly", but a real bike lane helps me feel much safer and less of a burden to drivers and buses. The Virgil bike lane is very short. I guess I am rambling a bit, but I would just like to see more city infrastructure for biking, not just weekend recreation. Thanks, Parker	<p>Metro recognizes that active transportation is a vital component of the multi-modal transportation system. Bicycling and walking are important first and last mile modes to support the expansion of transit usage and offer their own public health and environmental benefits. The LRTP details several regionally significant major multiuse paths as well as the many policies and programs that Metro has established to support active transportation, complete streets, and first and last mile connectivity. Most investment decisions for active transportation happens within local jurisdictions, and therefore, Metro will work with our local partners to improve bicycle and pedestrian travel within LA County. Metro encourages stakeholders to provide your feedback directly to local and regional governments as well as to Metro on future planning efforts.</p>
Corah	27	I am definitely excited about upcoming improvements to the metro system. I do urge that you take current conversations about policing extremely seriously in the metro expansion. I suggest not to create a larger police force meant to guard the metro system but instead have trained professionals not associated with law enforcement there to help those in need. Homelessness is not a crime and homeless people residing in metro areas should not be punished. Please make sure in future implementation you are taking into account how the metro system can also greatly impact systemic racism and can be part of the solution to creating a safer community for Black members of LA County. I really hope to see this issue addressed in your next draft. Thank you very much.	<p>In March of 2017, Metro Transit Security entered into a five-year contract with three police agencies to further support security on bus and rail lines across Metro's transit system. That same year, Metro launched the use of a multi-agency approach to patrol LA County's 88 cities. This new policing structure includes the Los Angeles County Sheriff's Department, Los Angeles City Police Department, and Long Beach Police Department. Our partnership increases the "felt presence" of officers riding our buses and trains to deter crime and give riders and employees more assurance that they can ride the system safely. Metro remains committed to retaining the confidence of its transit customers, who depend on a safe, secure transit system for their daily transportation needs.</p>

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Faramarz	28	LRTP is based on pre-COVID data and public info. The board should delay LRTP to 2021 to allow Metro to update it	The LRTP was developed prior to the onset of the COVID-19 pandemic. The LRTP will include a new discussion of the COVID-19 pandemic and the variety of impacts it has on the contents of the LRTP, including the impacts on Metro's financials, operations, and other efforts. The LRTP is the 30-year plan for Los Angeles County. The near-term strategies and actions are to be determined and will be documented in the Short-Range Transportation Plan (S RTP). The LRTP is a living document that will be amended as necessary as the county's priorities change and as financial, technological, or demographic changes warrant updates to the plan. The LRTP will include a new discussion of the COVID-19 pandemic and the variety of impacts it has on the contents of the LRTP. The new financial realities facing LA Metro will be explored extensively over the next several years and will be documented in the S RTP.
	29	the Draft 2020 LRTP is both realist and bold	Comment noted.
Stephen	30	I would suggest Metro, as the lead transportation agency of Los Angeles County, to make seamless inter-agency transfers part of a goal in the longrange transit plan. Currently, most inter-agency transfers costs anadditional 50 cents for regular riders, and it is for one trip only. This is completely different than transfers between different lines in the metrosystem, which is free and can be for unlimited trips within two hours andwith a TAP card. The difference between inter-agency transfer and intra-agency transfer is confusing to riders, and it causes inefficiencies in service restructuring when passengers would prefer one long metro busride instead of a combination of a Metro rail network and a local muni busconnection because of the fare policy. The one trip limit on inter-agencytransfer means a passenger travel a metro-muni-metro trip will be chargedtwo metro one way fares and a \$.50 IAT charge, and a muni-metro-metro tripwill cost the fare of one muni trip, \$.50 IAT charge, and another metrofare. This results in sometimes more than a double than a trip that onlyinvolves metro service.To improve the transfer system, I recommend that transfer fare betransferred to a Trip Value" system. The system is currently used in the	Metro is conducting a Comprehensive Pricing Study. The study goals are revenue, ridership, equity, security, and customer experience–, and will be considered against deliverability within the context of the near and long-term agency recovery from the COVID-19 pandemic.
Dan	31	Dear Metro,I support the Long Range Transportation Plan generally, with the following priorities requested.1) The extension of the Crenshaw/LAX Metrorail line north to Mid-City, West Hollywood and WeHo. This extension must go at least as west as Fairfax or it will miss all the ridership generators in the area. I also hope it will be extended to the Hollywood Bowl.2) The Sepulveda Transit Corridor Project. This should be built in a manner that it can be extended north to the Sylmar Metrolink station and south to LAX3) A comprehensive network of enforced bus lanes throughout Los Angeles.4) Cooperation with Metrolink, Amtrak, and California High Speed Rail necessarily to facilitate longer-distance rail travel.5) I would also like to see a cross county network of numbered bike routes using bikeways, bike lanes, and bike sharrows, similar to the numbered bike routes in San Francisco County.Thank you!	<p>Metro's transit capital expansion program includes the most aggressive expansion of light rail and heavy rail in the country. We are committed to bringing high quality transit to as many residents as possible; however, we realize that we cannot have rail stations and rail lines everywhere. Metro is working to provide first and last mile connectivity to our rail stations and, working with our partners, to offer high quality bus service where we do not have rail. Furthermore, the final station locations and alignments of the rail lines included in the LRTP are subject to change during the environmental planning phases of the project development.</p> <p>The final alignment and station location for rail projects included in the LRTP are subject to change during the environmental planning phase of the project development. We will pass along this comment to the project team and we encourage you to provide additional project-specific feedback at: <a href="http://www.metro.net/projects">www.metro.net/projects</a>.</p>

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### Public Comments

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Paul	32	You have to emphasize building and expanding trains - especially through sepulveda pass to the airport and through West Hollywood. This would ease traffic immensely. These are major problem areas and train lines need to be rebuilt asap, before the olympics. You are so far behind with the trains, I encourage you to do whatever you can to keep up. Having a rail system by 2047 is not fast enough. Advocate for more money wherever possible. I support public private partnerships. If you build it, they will come.	Metro's transit capital expansion program includes the most aggressive expansion of light rail and heavy rail in the country. We are committed to bringing high quality transit to as many residents as possible; however, we realize that we cannot have rail stations and rail lines everywhere. Metro is working to provide first and last mile connectivity to our rail stations and, working with our partners, to offer high quality bus service where we do not have rail. Furthermore, the final station locations and alignments of the rail lines included in the LRTP are subject to change during the environmental planning phases of the project development.
Arthur	33	I would like metro to do a better job and getting to there stops on time in the morning, afternoon and evening time, because some people have to go to school, work, and want to take a vacation day.	Metro is committed to building a World Class Bus system. Improvements planned for the system include those to enhance the customer experience, improve the system operations, and to provide reliable access to riders where and when they need to travel. We recognize that the transit system has lost ridership over the last several years and are committed to improving our bus service. Through our NextGen Bus Plan, Metro is redesigning our entire bus network and these changes will be implemented over the next 18 months. Working with local partners, Metro is exploring projects to improve bus speed and reliability in congested corridors. Additional efforts to improve customer experience, including safety and security, are underway as well.
David	34	Your overall goal of making the public transit experience as good as private transit is the correct one. Some suggestions: 1) Private compartments with plush cushioned seating, music, soundproofing, so two can talk to each other without bothering others, or one person can talk on the phone. 2) No homeless or separate cars for homeless (they smell bad) 3) Shower facilities and clean clothes for the homeless. There are plenty of clean clothes around. Organizations like Goodwill and Salvation Army send huge bundles of clothes to other countries. 4) Build the transit lines above the highways so the transit riders have more light and views, than the drivers on the highways beneath them. It's a powerful, symbolic way to say that the transit riders are the upper class and the drivers are the lower class. 5) Make the transit go all the way to destinations, instead of part way. At Dodger Stadium, Santa Monica Beach and many other destinations, the transit stops short of the destination, and riders have to walk or transfer to another mode of transit. 6) Double the number of tracks, so you can have express trains that go end to end with only one stop, and local trains that stop at every station. 7) Simplify the Transit Homeless Action Plan. It has 18 goals, which are then expanded to 64 separate bullet points. 64 separate goals. That's ridiculous. Instead of expanding the process, making it more complex, you need to do the opposite - compress it, simplify it, pick 3 or 4 goals and	<p>In spring 2016, at the direction of our CEO, Metro created a Homeless Task Force to address homelessness in and around the transit system and align action with County and City of Los Angeles priorities. In February 2017, the Homeless Action Plan was finalized. The Action Plan's goals are threefold: 1. to enhance the customer experience; 2. maintain a safe and secure system; and, 3. connect homeless persons in the transit system to services and resources under Measures H and HHH. Metro continues to expand efforts in this area.</p> <p>Metro is committed to building a World Class Bus system. Improvements planned for the system include those to enhance the customer experience, improve the system operations, and to provide reliable access to riders where and when they need to travel. We recognize that the transit system has lost ridership over the last several years and are committed to improving our bus service. Through our NextGen Bus Plan, Metro is redesigning our entire bus network and these changes will be implemented over the next 18 months. Working with local partners, Metro is exploring projects to improve bus speed and reliability in congested corridors. Additional efforts to improve customer experience, including safety and security, are underway as well.</p>
Kevin	37	Where's the part of your plan where you talk about providing bussing for the LAPD as they detain peaceful protesters?	In March of 2017, Metro Transit Security entered into a five-year contract with three police agencies to further support security on bus and rail lines across Metro's transit system. That same year, Metro launched the use of a multi-agency approach to patrol LA County's 88 cities. This new policing structure includes the Los Angeles County Sheriff's Department, Los Angeles City Police Department, and Long Beach Police Department. Our partnership increases the "felt presence" of officers riding our buses and trains to deter crime and give riders and employees more assurance that they can ride the system safely. Metro remains committed to retaining the confidence of its transit customers, who depend on a safe, secure transit system for their daily transportation needs.



## Attachment C – LRTP Public Comment Response Matrix

### Public Comments

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Kelly	38	Would love if next time you included the correct date for the SFV meeting, so we could let you know we're not okay with your cooperation with the LAPD arresting peaceful protestors.	In March of 2017, Metro Transit Security entered into a five-year contract with three police agencies to further support security on bus and rail lines across Metro's transit system. That same year, Metro launched the use of a multi-agency approach to patrol LA County's 88 cities. This new policing structure includes the Los Angeles County Sheriff's Department, Los Angeles City Police Department, and Long Beach Police Department. Our partnership increases the "felt presence" of officers riding our buses and trains to deter crime and give riders and employees more assurance that they can ride the system safely. Metro remains committed to retaining the confidence of its transit customers, who depend on a safe, secure transit system for their daily transportation needs.
goshakk	39	Does your plan also include stopping aiding the racist LAPD and apologizing for already have helped them?	In March of 2017, Metro Transit Security entered into a five-year contract with three police agencies to further support security on bus and rail lines across Metro's transit system. That same year, Metro launched the use of a multi-agency approach to patrol LA County's 88 cities. This new policing structure includes the Los Angeles County Sheriff's Department, Los Angeles City Police Department, and Long Beach Police Department. Our partnership increases the "felt presence" of officers riding our buses and trains to deter crime and give riders and employees more assurance that they can ride the system safely. Metro remains committed to retaining the confidence of its transit customers, who depend on a safe, secure transit system for their daily transportation needs.
Erasmus	44	En la estación de La "FIRESTON" el elevador todos los días está muy sucio, lo ocupan como: W.C. (orinan, defecan y fuman cigarrillos ?)	In spring 2016, at the direction of our CEO, Metro created a Homeless Task Force to address homelessness in and around the transit system and align action with County and City of Los Angeles priorities. In February 2017, the Homeless Action Plan was finalized. The Action Plan's goals are threefold: 1. to enhance the customer experience; 2. maintain a safe and secure system; and, 3. connect homeless persons in the transit system to services and resources under Measures H and HHH. Metro continues to expand efforts in this area.
Claire	46	That's great that things are expanding outwards but still changes nothing for life within the city. Metro transportation is completely unusable unless you live directly next to a stop which is almost never the case. Would love to use the metro if I could (Echo Park) but alas...	Metro's transit capital expansion program includes the most aggressive expansion of light rail and heavy rail in the country. We are committed to bringing high quality transit to as many residents as possible; however, we realize that we cannot have rail stations and rail lines everywhere. Metro is working to provide first and last mile connectivity to our rail stations and, working with our partners, to offer high quality bus service where we do not have rail. Furthermore, the final station locations and alignments of the rail lines included in the LRTP are subject to change during the environmental planning phases of the project development.

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Name	#	Comment Received	Response
Spencer	49	First, there is almost no concrete plan or mentioning of additional bike lanes, apart from the \$600m being spent on the three bike paths totaling less than 30 miles. How many miles and networks of bike lanes is metro committing to constructing by 2028 given the high # of folks who live within 10min ride of jobs and activity centers? Second, why is 26% of the 30 year funds being allocated to highways and roadways and multimodal, and how much of that 26% is going to multimodal? thirdly, why is only 5% of the 2020-2050 funds earmarked toward bus capital when bus riders make up that vast majority of metro riders and will continue to do so for the foreseeable future?	<p>The LRTP's investment plan is built upon previous efforts and the Metro Board's previous directives. The Measure M expenditure plan was developed with significant public input and was passed by over 70% of LA County voters, and much of the funding allocated for projects and programs included in the LRTP was written into the Measure M statute. It is important for Metro to support all modes while emphasizing our commitment to transit and sustainable transportation options; however, there will be additional opportunities to influence future investment decisions. Local jurisdictions receive funding in the form of "Local Return" and most subregions receive funding through "Multi-year Subregional Programs", which can be used for a variety of project types. Metro encourages stakeholders to provide your feedback directly to local and regional governments as well as to Metro on future planning efforts. The Short Range Transportation Plan, to be completed following the LRTP, will re-evaluate the financial realities facing LA County over the next decade and will provide an opportunity for Metro and our partners to examine the prioritization of funding.</p> <p>Metro recognizes that active transportation is a vital component of the multi-modal transportation system. Bicycling and walking are important first and last mile modes to support the expansion of transit usage and offer their own public health and environmental benefits. The LRTP details several regionally significant major multiuse paths as well as the many policies and programs that Metro has established to support active transportation, complete streets, and first and last mile connectivity. Most investment decisions for active transportation happens within local jurisdictions, and therefore, Metro will work with our local partners to improve bicycle and pedestrian travel within LA County. Metro encourages stakeholders to provide your feedback directly to local and regional governments as well as to Metro on future planning efforts.</p>
Olga	53	GRACIAS POR APOYARNOS EN NO PAGAR LOS PASAJES BENDICIONES ATODOS	Comment noted.
Olga	54	GRACIAS POR SUS BENEFICIOS Y POR NO DEJAR Q PAGUEMOS EN ESTOS TIEMPOS DIFÍCILES. Q ESTAMOS PASANDO DIOS LES BENDIGA Y LES GUARDE ATODOS	Comment noted.
Ward	56	Haven't read the transcript yet.I hope the intent meets the standard that will be contributing effort s for the common citizen of the state of the union.	Comment noted.
Charlie	58	Improve trasportation and security. I don't feel safe driving or walking down LA streets. Reduce mayoral influence, build up small business.	Safety of our riders is our number one priority. Metro is committed to maintaining a safe and secure transit system, while balancing our the community concerns surrounding policing, homelessness, and customer experience. Thank you for your feedback and we will share this comment with the appropriate department within Metro.

## Attachment C – LRTP Public Comment Response Matrix

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Name	#	Comment Received	Response
Eli	59	This is great news! Thank you for putting forward this plan to improve LA. I think bike lanes should be painted different color than the road, or blocked off from cars by permanent cones/curb, or both. Bikes should be allowed on all buses & trains.	Metro recognizes that active transportation is a vital component of the multi-modal transportation system. Bicycling and walking are important first and last mile modes to support the expansion of transit usage and offer their own public health and environmental benefits. The LRTP details several regionally significant major multiuse paths as well as the many policies and programs that Metro has established to support active transportation, complete streets, and first and last mile connectivity. Most investment decisions for active transportation happens within local jurisdictions, and therefore, Metro will work with our local partners to improve bicycle and pedestrian travel within LA County. Metro encourages stakeholders to provide your feedback directly to local and regional governments as well as to Metro on future planning efforts.
Heather	60	It all sounds great! I'll believe it when I see it. I've only lived in LA for a year now and I didn't take my car with me so transitioning to public transportation was a bit of a shock. I wish there were more stations in popular areas like west hollywood and sunset blvd or melrose. If there's extensions being added, CLEANER and safer interiors and stations, then I'm happy.	Metro's transit capital expansion program includes the most aggressive expansion of light rail and heavy rail in the country. We are committed to bringing high quality transit to as many residents as possible; however, we realize that we cannot have rail stations and rail lines everywhere. Metro is working to provide first and last mile connectivity to our rail stations and, working with our partners, to offer high quality bus service where we do not have rail. Furthermore, the final station locations and alignments of the rail lines included in the LRTP are subject to change during the environmental planning phases of the project development.
Nova	63	There should be more routes to cities outside of downtown LA and better transfer options. This will also reduce congestion; people won't have to relocate for work and can live in neighboring cities. If some parts of the metro can't run 24 hours, they should at least stop running at a later time. Honestly just ask the UK for help, their system isn't perfect but it's 100 years ahead of this one.	Metro is committed to building a World Class Bus system. Improvements planned for the system include those to enhance the customer experience, improve the system operations, and to provide reliable access to riders where and when they need to travel. We recognize that the transit system has lost ridership over the last several years and are committed to improving our bus service. Through our NextGen Bus Plan, Metro is redesigning our entire bus network and these changes will be implemented over the next 18 months. Working with local partners, Metro is exploring projects to improve bus speed and reliability in congested corridors. Additional efforts to improve customer experience, including safety and security, are underway as well.
China	64	Rail down vermont	The final alignment and station location for rail projects included in the LRTP are subject to change during the environmental planning phase of the project development. We will pass along this comment to the project team and we encourage you to provide additional project-specific feedback at: <a href="http://www.metro.net/projects">www.metro.net/projects</a> .
Enrique	65	Keep up the good work	Comment noted.
Jaime	66	We need more bicycle access and freeway bike lanes.	Metro recognizes that active transportation is a vital component of the multi-modal transportation system. Bicycling and walking are important first and last mile modes to support the expansion of transit usage and offer their own public health and environmental benefits. The LRTP details several regionally significant major multiuse paths as well as the many policies and programs that Metro has established to support active transportation, complete streets, and first and last mile connectivity. Most investment decisions for active transportation happens within local jurisdictions, and therefore, Metro will work with our local partners to improve bicycle and pedestrian travel within LA County. Metro encourages stakeholders to provide your feedback directly to local and regional governments as well as to Metro on future planning efforts.

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Name	#	Comment Received	Response
Jonathan	67	Hi, I think the plan is good in general. I especially like the investments in complete streets and transit, and the congestion pricing proposal. I don't know why we're spending so much on highway investments, especially on capacity expansion. The law of induced demand means that those expansions will only increase the number of people driving, and will have no effect on traffic. Instead, I think we should invest in getting transit projects moving faster, like the Crenshaw Northern extension, getting new transit projects off the ground, investing more in complete streets, investing in signal preemption for our busses and light rail lines, (like the E line) metrolink electrification and reducing things like street parking and metro parking garages. These investments will actually reduce the amount people are driving because they'll reprioritize transit ahead of driving. Something we desperately need to do to reach our climate goals.	<p>Metro is committed to building a World Class Bus system. Improvements planned for the system include those to enhance the customer experience, improve the system operations, and to provide reliable access to riders where and when they need to travel. We recognize that the transit system has lost ridership over the last several years and are committed to improving our bus service. Through our NextGen Bus Plan, Metro is redesigning our entire bus network and these changes will be implemented over the next 18 months. Working with local partners, Metro is exploring projects to improve bus speed and reliability in congested corridors. Additional efforts to improve customer experience, including safety and security, are underway as well.</p> <p>Metro recognizes that active transportation is a vital component of the multi-modal transportation system. Bicycling and walking are important first and last mile modes to support the expansion of transit usage and offer their own public health and environmental benefits. The LRTP details several regionally significant major multiuse paths as well as the many policies and programs that Metro has established to support active transportation, complete streets, and first and last mile connectivity. Most investment decisions for active transportation happens within local jurisdictions, and therefore, Metro will work with our local partners to improve bicycle and pedestrian travel within LA County. Metro encourages stakeholders to provide your feedback directly to local and regional governments as well as to Metro on future planning efforts.</p>
Kat	70	I would really like the Crenshaw line to be built soon, and have a stop at either Santa Monica and Fairfax or Santa Monica and La Brea. It would be great if it connected to Koreatown, the west side, and the airport. I commute to either Koreatown or UCLA everyday and West Hollywood has a shuttle but I work late and can't take it at night. Thanks! Opt In:	The final alignment and station location for rail projects included in the LRTP are subject to change during the environmental planning phase of the project development. We will pass along this comment to the project team and we encourage you to provide additional project-specific feedback at: <a href="http://www.metro.net/projects">www.metro.net/projects</a> .
Neelix	71	Rail down Vermont now	The final alignment and station location for rail projects included in the LRTP are subject to change during the environmental planning phase of the project development. We will pass along this comment to the project team and we encourage you to provide additional project-specific feedback at: <a href="http://www.metro.net/projects">www.metro.net/projects</a> .

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Name	#	Comment Received	Response
Nicholas	72	<p>Metro has consistently impressed me with its commitment to improvement sustainable mobility infrastructure and ecosystems. It is also laudable in its efforts to always involve the communities it serves. However (there's *always* a "but"!)</p> <p>Having attended a number of workshops and meetings, I am repeatedly thanked and praised by consultants and staff alike for my feedback and input (given that I do this for a living), and they express full enthusiasm for my recommendations, tempered by the realistic admission that municipal and regional initiatives are rife with complexities and bureaucracy! What fails to happen is visible and tangible manifestation of any aspect of my recommendations, namely that Metro make truly disruptive and changemaking decisions to manifest: 1- a meaningful and urgent transition from PV transport to public transpo, pedestrian and bicycle infrastructures, 2- Complete Streets and street calming measures as the norm, and not a fashionable exception, 3- full networks of sustainable mobility, instead of piecemeal grantmaking that provides little by way of viable transportation options, 4- successful marketing initiatives (not sales, promotion, or publicity, but true and meaningful strategic marketing that connects the Metro brand and its activities with its constituent riders and communities) that effectively inform, inspire and empower stakeholders across the spectrum to become more involved and invested in the success of those programs.</p>	Revisit
	73	<p>It's disheartening to see a lack of details on how biking will be encouraged as a viable transportation option. I elect to not own a car and use my bike (and sometimes Metro bikeshare) as my main transportation. While the LA River bikepath will be a nice, it is not something that will make getting around the city any easier by bike. Items I would like to see addressed: - Widening bike lanes on streets that already have paths. For example, the bike "lane" on Mission Rd/Huntington Blvd between Lincoln Heights and South Pasadena is mostly in the ditch, which is overgrown with weeds and shrubs. Meanwhile, there are 6 lanes for car travel. It is clear where the priorities truly lie. Similarly, the bike lane on Sunset Blvd is also narrow, and also the street parking is so narrow that cars partially obstruct the lane, further reducing its usefulness and the safety of riding in it. - More protected bike lanes. The example of Sunset Blvd I mentioned above could be alleviated by moving car parking between road traffic and the bike lane. - Connecting bike lanes in a way that respects the bicyclist. An obvious example is 5th/6th Streets in DTLA -- they are being repaved but bike lanes are only being added to a fraction of the newly paved streets. There are plenty of examples of incomplete bike lanes, such as Sunset Blvd bike lane not extending all the way to downtown, the Venice Blvd bike lane not extending to downtown, the 7th St. bike lane ending at Main St. instead of extending all the way into the Arts District. - Maintained bike lanes (too much trash and overgrown shrubs in the bike lane) There is clearly not much of an effort put in to keeping bike lanes safe to ride in, as evidenced by the overgrown shrubbery along Huntington Blvd., and piles of trash in places like the bike lane in the 2nd St. tunnel. - Better paved bike lanes A lot of bike lanes are half asphalt and half storm drain, which makes it difficult to ride. It leaves me</p>	<p>Metro recognizes that active transportation is a vital component of the multi-modal transportation system. Bicycling and walking are important first and last mile modes to support the expansion of transit usage and offer their own public health and environmental benefits. The LRTP details several regionally significant major multi-use paths as well as the many policies and programs that Metro has established to support active transportation, complete streets, and first and last mile connectivity. Most investment decisions for active transportation happens within local jurisdictions, and therefore, Metro will work with our local partners to improve bicycle and pedestrian travel within LA County. Metro encourages stakeholders to provide your feedback directly to local and regional governments as well as to Metro on future planning efforts.</p>

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Name	#	Comment Received	Response
Erin	74	Please don't use these funds for highway and road improvements. Invest that 100 billion dollars in more protected bikes lanes and building the metro more quickly. I am a unicorn in LA, I don't have a car and I get around entirely through public transit. I know from experience how inconsistent, slow, and inaccessible the metro and the buses are. Please stop investing in vehicles that are spewing CO2 and other pollutants into the air, and build a transit system that allows the people of the city to get around in a cleaner, faster way.	The LRTP's investment plan is built upon previous efforts and the Metro Board's previous directives. The Measure M expenditure plan was developed with significant public input and was passed by over 70% of LA County voters, and much of the funding allocated for projects and programs included in the LRTP was written into the Measure M statute. Metro must balance environmental sustainability and equity imperatives with the realism that our roadway transportation system is still crucially important for regional mobility. While there is an urgent need to provide more sustainable transportation options, we will seek to modernize and better utilize our roadways. We will share this comment with the appropriate departments within Metro.
Andrew	75	(1) More transit, fewer highway projects(2) Don't divide resources based on region. Instead, divide it based upon need (especially population and job density)(3) Move highway funds from roads to freeway cap parks(4) Add bus only lanes all over	The LRTP is a regional plan for mobility throughout LA County. The project prioritization process included as part of Measure M compared the benefits of highway and transit projects relative to each other. This comparison included systemwide impacts; network impacts and benefits to other areas beyond the project's scope were included in the prioritization process. However, providing benefits to each subregion within LA County is an important goal for Metro. Therefore, overall project performance and subregional equity are balanced in the LRTP's investment plan. The Short Range Transportation Plan, to be completed following the LRTP, will re-evaluate the financial realities facing LA County over the next decade and will provide an opportunity for Metro and our partners to examine the prioritization of funding.
Michael	76	I love the commitment to better transit, complete streets, less congestion and opportunity. However, I still see way too much budget devoted to highways, roadways and other unnecessary line items to actually accomplish those lofty goals. Cost per mile of those projects, like highway or road expansion/repair, is well into the millions, while things with greater impact, like dedicated bus lanes, are only in the 6 figures per mile. We can do better. We should be dedicating all our resources to strengthening a complete network of protected bike paths, dedicated bus lanes, increased metro-line service, far more TOD and affordable units on metro-owned property, and vastly improving and building on the Complete Streets Policy and Open Streets Program. Everyone knows what will work, we just have to have the political willpower to put the budget toward it and not be apologetic. Lets get this done!	The LRTP's investment plan is built upon previous efforts and the Metro Board's previous directives. The Measure M expenditure plan was developed with significant public input and was passed by over 70% of LA County voters, and much of the funding allocated for projects and programs included in the LRTP was written into the Measure M statute. It is important for Metro to support all modes while emphasizing our commitment to transit and sustainable transportation options; however, there will be additional opportunities to influence future investment decisions. Local jurisdictions receive funding in the form of "Local Return" and most subregions receive funding through "Multi-year Subregional Programs", which can be used for a variety of project types. Metro encourages stakeholders to provide your feedback directly to local and regional governments as well as to Metro on future planning efforts. The Short Range Transportation Plan, to be completed following the LRTP, will re-evaluate the financial realities facing LA County over the next decade and will provide an opportunity for Metro and our partners to examine the prioritization of funding.



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			<p>Metro recognizes that active transportation is a vital component of the multi-modal transportation system. Bicycling and walking are important first and last mile modes to support the expansion of transit usage and offer their own public health and environmental benefits. The LRTP details several regionally significant major multiuse paths as well as the many policies and programs that Metro has established to support active transportation, complete streets, and first and last mile connectivity. Most investment decisions for active transportation happens within local jurisdictions, and therefore, Metro will work with our local partners to improve bicycle and pedestrian travel within LA County. Metro encourages stakeholders to provide your feedback directly to local and regional governments as well as to Metro on future planning efforts.</p>
Richard A.	79	<p>I would appreciate a response to this email. In the past, after making a comment, I did not receive a reply. ( A transit system is being constructed on the extreme North end of the San Gabriel Valley. Another system is being constructed on the extreme South end. I see in the LRTP that nothing is mentioned for the center of the San Gabriel Valley, where the vast majority of SGV residents reside.) If I am mistaken in this notion, please let me know what is planned. If I am correct, please let me know why this area is being neglected! Again, a response to this message is requested. Otherwise, I would consider this a waste of time and come to the realization that the MTA is just going through the motions.</p>	<p>The LRTP is a regional plan for mobility throughout LA County. The project prioritization process included as part of Measure M compared the benefits of highway and transit projects relative to each other. This comparison included systemwide impacts; network impacts and benefits to other areas beyond the project's scope were included in the prioritization process. However, providing benefits to each subregion within LA County is an important goal for Metro. Therefore, overall project performance and subregional equity are balanced in the LRTP's investment plan. The Short Range Transportation Plan, to be completed following the LRTP, will re-evaluate the financial realities facing LA County over the next decade and will provide an opportunity for Metro and our partners to examine the prioritization of funding.</p>
Kelly J.	80	<p>Any plan which fails to reduce Expresslane taxes on our freeway system is a failed plan. I see this current one includes expansion, which fails to address a key need of our interstate highway system to be toll free. Congestion pricing only benefits the rich. There is also nothing in this plan about reducing corruption within Metro. The failed electric bus program and lack of ability to extend the goldline to Claremont using Measure M regressive taxation should show that.</p>	<p>Comment noted.</p>
Tamara	81	<p>More bike lanes please. They are essential.</p>	<p>Metro recognizes that active transportation is a vital component of the multi-modal transportation system. Bicycling and walking are important first and last mile modes to support the expansion of transit usage and offer their own public health and environmental benefits. The LRTP details several regionally significant major multiuse paths as well as the many policies and programs that Metro has established to support active transportation, complete streets, and first and last mile connectivity. Most investment decisions for active transportation happens within local jurisdictions, and therefore, Metro will work with our local partners to improve bicycle and pedestrian travel within LA County. Metro encourages stakeholders to provide your feedback directly to local and regional governments as well as to Metro on future planning efforts.</p>
Robert	83	<p>Gold line needs to go to Ontario Airport. More accommodations for bicycles need to be included in order for the transportation plan to be forward thinking.</p>	<p>The final alignment and station location for rail projects included in the LRTP are subject to change during the environmental planning phase of the project development. We will pass along this comment to the project team and we encourage you to provide additional project-specific feedback at: <a href="http://www.metro.net/projects">www.metro.net/projects</a>.</p>

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Name	#	Comment Received	Response
Jim	85	Stop the stupid "road diet" construction. People can't commute to work on bikes and you're just making the roads more congested and life unbearable for us who have to commute to work by car. I'd ride Metro, but it isn't safe and takes twice as long to get where I need to go. Ask the Japanese for advice since they seem to know how to design commuter rail that actually works. I moved here from Japan (where I could rely on the rail to be on time and be safe) to here in 2003 and was sooooo disappointed to realize for the first time what a second-rate country I live in. Sure wish you could get your act together, but I'm not holding my breath.	<p>Comment noted.</p> <p>The LRTP's investment plan is built upon previous efforts and the Metro Board's previous directives. The Measure M expenditure plan was developed with significant public input and was passed by over 70% of LA County voters, and much of the funding allocated for projects and programs included in the LRTP was written into the Measure M statute. It is important for Metro to support all modes while emphasizing our commitment to transit and sustainable transportation options; however, there will be additional opportunities to influence future investment decisions. Local jurisdictions receive funding in the form of "Local Return" and most subregions receive funding through "Multi-year Subregional Programs", which can be used for a variety of project types. Metro encourages stakeholders to provide your feedback directly to local and regional governments as well as to Metro on future planning efforts. The Short Range Transportation Plan, to be completed following the LRTP, will re-evaluate the financial realities facing LA County over the next decade and will provide an opportunity for Metro and our partners to examine the prioritization of funding.</p>
Numan	86	I am disappointed that completion of the 710 Freeway to Pasadena is not mentioned in this plan. This is a necessary piece of infrastructure that will offer north-south drivers a bypass around Downtown LA, something that currently does not exist. It is possible to build this freeway (almost surely in tunnel form) in a way that will satisfy the concerns of surrounding communities while also providing a meaningful alternative for through commuters. The currently mentioned 710 North improvements, while helpful, are no substitute for this critical link. Please include this project in your LRTP. Thank you.	<p>We are reviewing all project details, including the available funding, the project cost, and the opening year in advance of the adoption of the LRTP. We will share this comment with the appropriate project team.</p>
Fred	87	Thank you for preparing this draft. I have two questions/comments:1. According to recent estimates, boardings for Metro dropped around 17 percent in the past few years—from just under 473 million in 2013 to around 391 million in 2018. Some of this may be attributed to ride-sharing (Uber/Lyft) but how can Metro justify spending \$400 billion on future transit when public ridership is clearly not working and/or not a priority for many residents.2. Ridership decreased significantly during the COVID19 lockdown. Although it may increase over time, given the fact that there may be a strong shift to work-at-home policies, why is spending \$400 billion on transit a smart idea at this juncture? Traffic, congestion, etc. may naturally decrease in the wake of a paradigm shift about how people work in the future. Many of these 'improvement' many not be needed and the funds could be used elsewhere.Thank you.	<p>The LRTP was developed prior to the onset of the COVID-19 pandemic. The LRTP will include a new discussion of the COVID-19 pandemic and the variety of impacts it has on the contents of the LRTP, including the impacts on Metro's financials, operations, and other efforts. The LRTP is the 30-year plan for Los Angeles County. The near-term strategies and actions are to be determined and will be documented in the Short-Range Transportation Plan (S RTP). The LRTP is a living document that will be amended as necessary as the county's priorities change and as financial, technological, or demographic changes warrant updates to the plan. The LRTP will include a new discussion of the COVID-19 pandemic and the variety of impacts it has on the contents of the LRTP. The new financial realities facing LA Metro will be explored extensively over the next several years and will be documented in the S RTP.</p> <p>Metro is committed to building a World Class Bus system. Improvements planned for the system include those to enhance the customer experience, improve the system operations, and to provide reliable access to riders where and when they need to travel. We recognize that the transit system has lost ridership over the last several years and are committed to improving our bus service. Through our NextGen Bus Plan, Metro is redesigning our entire bus network and these changes will be implemented over the next 18 months. Working with local partners, Metro is exploring projects to improve bus speed and reliability in congested corridors. Additional efforts to improve customer experience, including safety and security, are underway as well.</p>

## Attachment C – LRTP Public Comment Response Matrix

### Public Comments

Name	#	Comment Received	Response
Carl	88	I think public transportation has improved in Long Beach. More of our members are riding the bus to work or to shop. At least, that was the case before the pandemic. The concerns are for safety and also better service on the weekends (getting to church ;-) Thank you for your efforts to improve the system and lower gashouse emissions!	Metro is committed to building a World Class Bus system. Improvements planned for the system include those to enhance the customer experience, improve the system operations, and to provide reliable access to riders where and when they need to travel. We recognize that the transit system has lost ridership over the last several years and are committed to improving our bus service. Through our NextGen Bus Plan, Metro is redesigning our entire bus network and these changes will be implemented over the next 18 months. Working with local partners, Metro is exploring projects to improve bus speed and reliability in congested corridors. Additional efforts to improve customer experience, including safety and security, are underway as well.
William	89	I think it is a really crappy plan. Elon Musk would build an entire network of tunnels for probably free. Imagine going to griffith Park, Mt. Wilson, and the Beach in 15 minutes on a Boring Tunnel. Las Vegas in 30 minutes.	Comment noted.
Saif	90	The funding for LA Metro is OUTRAGEOUSLY HIGH! It's way too high even if it was being used by 10 times more people. Like many other small business owners, I'm planning to leave California very soon along with my business because our local government is run by THIEVES!	Comment noted.
Christine	91	\$32 MILLION A MILE FOR A BIKE PATH????!!!! Hope it's paved in gold.	More information on the assumptions of the plan, including the financial model, project-specific assumptions, and the LRTP performance evaluation are included in the LRTP Technical Document.
Glenn Thomas	93	Isuggest that those planning the future of the transit system make using the transit system a part of their jobs. The best way to truly knw what the commute entails is to be a commuters on a regulas basis maybe on altenating months aor weeks those most envlved in cummuter related issues (scheduling the actual acts of trsvel) use the system ad interact with its patrons on a regular basis. Thats ione idea i have many like utilizing the space for commercial and artistic growth among the school age riders>	Comment noted.
Nathaniel	96	No new lanes, only new trains please.	The LRTP's investment plan is built upon previous efforts and the Metro Board's previous directives. The Measure M expenditure plan was developed with significant public input and was passed by over 70% of LA County voters, and much of the funding allocated for projects and programs included in the LRTP was written into the Measure M statute. It is important for Metro to support all modes while emphasizing our commitment to transit and sustainable transportation options; however, there will be additional opportunities to influence future investment decisions. Local jurisdictions receive funding in the form of "Local Return" and most subregions receive funding through "Multi-year Subregional Programs", which can be used for a variety of project types. Metro encourages stakeholders to provide your feedback directly to local and regional governments as well as to Metro on future planning efforts. The Short Range Transportation Plan, to be completed following the LRTP, will re-evaluate the financial realities facing LA County over the next decade and will provide an opportunity for Metro and our partners to examine the prioritization of funding.

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Dor	97	All of the plan is very nice but I'm missing two major things and this is an underground metro line between Hollywood and Santa Monica and an underground metro line between LAX and Hollywood. I know metro lines are for the residents of the city and I'm sure that they will use it for going to the airport or to the beach but this also will help all the tourists in the city and will connect them with the main attractions Los Angeles has to offer. Thinking about the 2028 Summer Olympic Games and the World Cup in 2026 this is crucial for the city that just grow every day. I know that planning and building those lines take a lot of time but this should be a major concern to LA county and maybe even to America because this is what people gonna talk about after those events and if the transportation is not good they will complain about it. Maybe some help from the federal government can make these two lines be activated by 2028. 8 years is not a long time for that but it's possible with a collaboration between all offices. I'm just a student for civil engineering and I want to be a specialist in transportation and I also lived in Hollywood for long time without a car so I know how two line like I mentioned will be a great improvement for the people who lives in the city and this is why I had to write it for you.	Metro's transit capital expansion program includes the most aggressive expansion of light rail and heavy rail in the country. We are committed to bringing high quality transit to as many residents as possible; however, we realize that we cannot have rail stations and rail lines everywhere. Metro is working to provide first and last mile connectivity to our rail stations and, working with our partners, to offer high quality bus service where we do not have rail. Furthermore, the final station locations and alignments of the rail lines included in the LRTP are subject to change during the environmental planning phases of the project development.
Mary	98	I would like to know how to submit comments on this plan. There does not appear to be a link in the plan for online comments. Thank you, Mary Hruska	Thank you for your comments. The online submittal form that you utilized is the appropriate place for public comment
Kary	99	How about finishing the next gen bus plan, And la river bike plan, First	Thank you for your comment. The NextGen Bus Plan is in public comment period and will be implemented over the next 18 months. The LA River Path Plan is a multi-year, multi-jurisdictional effort. The LRTP shows Metro's commitment to these plans.
Alexander	100	Dear Metro Representative, Since 2004, I have been a frequent user of public transportation in Los Angeles. Even though it's been far from perfect, the system still offered relatively frequent and convenient service (albeit not always reliable), clean buses and trains, and a generally safe environment -- all of which has been an alternative to driving.... But only up until recently. Over the past five+ years, LA's mass transit has noticeably deteriorated, becoming a very unpleasant, unsafe, and an overall very time-consuming ordeal. Infrequent service, slow buses (with abnormally long run-times), and rising crime and harassment -- especially on our metro-rail trains -- all those factors have, sadly, become today's norm. That's in addition to removed Rapid service from some popular corridors -- and drastically reduced service on many local bus lines. So, overall - I'm disappointed with the degraded service -- and for the most part have switched back to driving (and/or commuting by bike). For many years, I had a chance to learn the L.A. transit network inside and out. So, my opinion will be based upon substantial experience and observation. Here are the key suggestions that should be implemented into your Long-Range Transportation Plan: (1) Safety and Security First and	<p>Metro is committed to building a World Class Bus system. Improvements planned for the system include those to enhance the customer experience, improve the system operations, and to provide reliable access to riders where and when they need to travel. We recognize that the transit system has lost ridership over the last several years and are committed to improving our bus service. Through our NextGen Bus Plan, Metro is redesigning our entire bus network and these changes will be implemented over the next 18 months. Working with local partners, Metro is exploring projects to improve bus speed and reliability in congested corridors. Additional efforts to improve customer experience, including safety and security, are underway as well.</p> <p>Safety of our riders is our number one priority. Metro is committed to maintaining a safe and secure transit system, while balancing our the community concerns surrounding policing, homelessness, and customer experience. Thank you for your feedback and we will share this comment with the appropriate department within Metro.</p>
Neal	101	The link does not work on OurNextLA. Please fix and resend.	Thank you for your comment. All of the links appear to be working
Bill	102	<a href="https://laist.com/2020/06/25/la_metro_will_look_to_replace_armed_policing_on_public_transit.php?utm_content=&amp;utm_medium=email&amp;utm_name=&amp;utm_source=govdelivery&amp;utm_term=This%20will%20put%20the%20final%20nails%20into%20MTA's%20coffin.%20Your%20own%20data%20shows%20violence%20in%20the%20system%20requires%20a%20law%20enforcement%20presence.%20Amazing%20those%20making%20the%20decisions%20don't%20even%20ride%20the%20system">https://laist.com/2020/06/25/la_metro_will_look_to_replace_armed_policing_on_public_transit.php?utm_content=&amp;utm_medium=email&amp;utm_name=&amp;utm_source=govdelivery&amp;utm_term=This will put the final nails into MTA's coffin. Your own data shows violence in the system requires a law enforcement presence. Amazing those making the decisions don't even ride the system</a>	Safety of our riders is our number one priority. Metro is committed to maintaining a safe and secure transit system, while balancing our the community concerns surrounding policing, homelessness, and customer experience. Thank you for your feedback and we will share this comment with the appropriate department within Metro.

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### Public Comments

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Spencer	103	While growth is natural for any city, LA's population is growing exponentially faster than infrastructure can be built to support it. Many metro lines remain unsafe as well, as I have been robbed on the blue line before. Large amounts of unpredictable homeless people make commuting by transit unappealing to middle-class and above commuters. Bike infrastructure is actually pretty good, but it would be nice to see more paths separate from streets like ballona creek or the la river one. The expo path is a prime example of what not to do. Overall though, as it is now the homeless problem is the biggest boon to mass transit use, with safety being the second biggest thing. Transit in LA really just feels like something made for poor people, not that there's anything wrong with that, but it limits the potential ridership.	<p>Safety of our riders is our number one priority. Metro is committed to maintaining a safe and secure transit system, while balancing our the community concerns surrounding policing, homelessness, and customer experience. Thank you for your feedback and we will share this comment with the appropriate department within Metro.</p> <p>Metro recognizes that active transportation is a vital component of the multi-modal transportation system. Bicycling and walking are important first and last mile modes to support the expansion of transit usage and offer their own public health and environmental benefits. The LRTP details several regionally significant major multiuse paths as well as the many policies and programs that Metro has established to support active transportation, complete streets, and first and last mile connectivity. Most investment decisions for active transportation happens within local jurisdictions, and therefore, Metro will work with our local partners to improve bicycle and pedestrian travel within LA County. Metro encourages stakeholders to provide your feedback directly to local and regional governments as well as to Metro on future planning efforts.</p>
Christian	104	Excited for the purple line extension but why is it so expensive? Would appreciate more details on why the purple line extension will ultimately cost 10 Billion by the time it's finished in 2027...	More information on the assumptions of the plan, including the financial model, project-specific assumptions, and the LRTP performance evaluation are included in the LRTP Technical Document.
Felisa	108	One of the things to keep in mind is that of when expanding, communities and families are not misplaced and are not gentrified. As well keeping in mind that many of the riders come from low income communities and that prices for the bus should be low pricesAlso what is LACMTA doing so that when hiring said "security" does not racial profile people of color? How is LACMTA divesting from LAPD and the LASD? What is LACMTA doing to hold city officials accountable during these hard times in which black people are dying ?Is not enough to just have the buses show that BLM. How is LACTMA giving back to POC communities?	<p>Addressing historical inequities is a guiding principle for the LRTP and a core tenet for Metro's current planning activities. Metro's Equity Platform will help guide future planning studies and investment decisions.</p> <p>In March of 2017, Metro Transit Security entered into a five-year contract with three police agencies to further support security on bus and rail lines across Metro's transit system. That same year, Metro launched the use of a multi-agency approach to patrol LA County's 88 cities. This new policing structure includes the Los Angeles County Sheriff's Department, Los Angeles City Police Department, and Long Beach Police Department. Our partnership increases the "felt presence" of officers riding our buses and trains to deter crime and give riders and employees more assurance that they can ride the system safely. Metro remains committed to retaining the confidence of its transit customers, who depend on a safe, secure transit system for their daily transportation needs.</p>
Lorence	110	Comment bike paths. more of it.	Metro recognizes that active transportation is a vital component of the multi-modal transportation system. Bicycling and walking are important first and last mile modes to support the expansion of transit usage and offer their own public health and environmental benefits. The LRTP details several regionally significant major multiuse paths as well as the many policies and programs that Metro has established to support active transportation, complete streets, and first and last mile connectivity. Most investment decisions for active transportation happens within local jurisdictions, and therefore, Metro will work with our local partners to improve bicycle and pedestrian travel within LA County. Metro encourages stakeholders to provide your feedback directly to local and regional governments as well as to Metro on future planning efforts.

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Name	#	Comment Received	Response
Benjamin	112	Hi there -Resident of CD-13 and Hollywood Studio District here. I've read through the entire Long Range Transit Plans and have a few comments & questions...*First* - in a post-COVID world, we NEED to prioritize the elements of the plan that will be most effective in providing safe alternatives to a personal vehicle: - bus-only lanes - all-door boarding - protected bike lanes - complete streets*Second - specific notes: *- transition to zero emission buses systemwide - the plan notes that Metro "would like" this to happen by 2030. This has to happen ASAP. This could also help convert non-riders to some level of ridership because many people enjoy getting that extra feeling of pride doing something good for the environment.- improving Metro stops and bus shelters - this must be done with the best air filtration & carbon sequestration designs available (think: CityTree< <a href="https://greencitysolutions.de/en/">https://greencitysolutions.de/en/</a> >, Smog Free Tower < <a href="https://www.studiooosegaard.net/project/smog-free-tower#:~:text=The%20%2Dmeter%20tall%20SMOG,small%20amount%20of%20green%20electricity.&gt;, etc.). Metal shelters/benches aren't good enough (and they're ugly!) and trees require too much time, maintenance, and water!- improving traveler information -&lt;/td&gt; &lt;td&gt; &lt;p&gt;Metro is committed to building a World Class Bus system. Improvements planned for the system include those to enhance the customer experience, improve the system operations, and to provide reliable access to riders where and when they need to travel. We recognize that the transit system has lost ridership over the last several years and are committed to improving our bus service. Through our NextGen Bus Plan, Metro is redesigning our entire bus network and these changes will be implemented over the next 18 months. Working with local partners, Metro is exploring projects to improve bus speed and reliability in congested corridors. Additional efforts to improve customer experience, including safety and security, are underway as well.&lt;/p&gt; &lt;p&gt;Sustainability is a guiding principle in this LRTP and a foundational element of our activities. Metro believes that environmental sustainability should carry through to each project, program, and policy. The LRTP details several specific strategies to address sustainability and our new report that will be published soon, Moving Beyond Sustainability, provides greater detail on how Metro will lead in sustainability.&lt;/p&gt; &lt;/td&gt; &lt;/tr&gt; &lt;tr&gt; &lt;td&gt;Mary&lt;/td&gt; &lt;td&gt;113&lt;/td&gt; &lt;td&gt;I would like to know how to submit comments on this plan. There does not appear to be a link in the plan for online comments.Thank you,&lt;/td&gt; &lt;td&gt;Duplicate comment&lt;/td&gt; &lt;/tr&gt; &lt;tr&gt; &lt;td&gt;Emma&lt;/td&gt; &lt;td&gt;114&lt;/td&gt; &lt;td&gt;To Whom It May Concern:I was unfortunately unable to attend the Live Webinar that was held yesterday evening for the LRTP. Is there a recorded video of the session that I might be able to access?&lt;/td&gt; &lt;td&gt;Thank you for your comments. The webinar was recorded and is posted at: &lt;a href=" http:="" ournext.la"="">ournext.la</a>	
Sophia	169	Decrease road funding and increase bus and train funding. I feel that our investment in road infrastructure is short sighted since it does not allow more city density, since it impacts the health of our citizens through pollution and collisions, and many of the highways we maintain are part of a racist legacy segregating out county.	<p>The LRTP's investment plan is built upon previous efforts and the Metro Board's previous directives. The Measure M expenditure plan was developed with significant public input and was passed by over 70% of LA County voters, and much of the funding allocated for projects and programs included in the LRTP was written into the Measure M statute. It is important for Metro to support all modes while emphasizing our commitment to transit and sustainable transportation options; however, there will be additional opportunities to influence future investment decisions. Local jurisdictions receive funding in the form of "Local Return" and most subregions receive funding through "Multi-year Subregional Programs", which can be used for a variety of project types. Metro encourages stakeholders to provide your feedback directly to local and regional governments as well as to Metro on future planning efforts. The Short Range Transportation Plan, to be completed following the LRTP, will re-evaluate the financial realities facing LA County over the next decade and will provide an opportunity for Metro and our partners to examine the prioritization of funding.</p> <p>The LRTP's investment plan is built upon previous efforts and the Metro Board's previous directives. The Measure M expenditure plan was developed with significant public input and was passed by over 70% of LA County voters, and much of the funding allocated for projects and programs included in the LRTP was written into the Measure M statute. Metro must balance environmental sustainability and equity imperatives with the realism that our roadway transportation system is still crucially important for regional mobility. While there is an urgent need to provide more sustainable transportation options, we will seek to modernize and better utilize our roadways. We will share this comment with the appropriate departments within Metro.</p>



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Name	#	Comment Received	Response
Adam	171	Broadly I support the draft Long Range Transit Plan, but it seems to leave out simple improvements to mass transit systems that would improve connectivity and reduce trip times throughout the region. Namely, the gap between the Green Line eastern terminus in Norwalk and the Norwalk Metrolink station is left unaddressed in the plan. No mention of a rail extension, or even a direct and frequent bus shuttle service, is made at all! Given the Crenshaw Line/airport people mover opening in the next few years, it seems shortsighted to force airport-bound travelers from southeast L.A. county and Orange County to travel all the way to Union Station just to double back. With the Expo Line already at max capacity during normal (pre-COVID) weekday rush hour, forcing travelers to rely on it - rather than the faster, fully-grade separated Green Line - is asking for more delays and headaches. Some form of dedicated, frequent, and rapid service between the Green Line terminus and Norwalk Metrolink station is crucial, and must match the Green Line timetable to be valuable. The existing municipal bus service takes	<p>We are reviewing all project details, including the available funding, the project cost, and the opening year in advance of the adoption of the LRTP. We will share this comment with the appropriate project team.</p> <p>Metro is committed to building a World Class Bus system. Improvements planned for the system include those to enhance the customer experience, improve the system operations, and to provide reliable access to riders where and when they need to travel. We recognize that the transit system has lost ridership over the last several years and are committed to improving our bus service. Through our NextGen Bus Plan, Metro is redesigning our entire bus network and these changes will be implemented over the next 18 months. Working with local partners, Metro is exploring projects to improve bus speed and reliability in congested corridors. Additional efforts to improve customer experience, including safety and security, are underway as well.</p>
Taylor	172	Lifelong Angelano here, would really like to see Metro prioritize rail over freeways, and possibly consider building two Crenshaw North lines (an "East" and a "West" to capture both speed (East) and a wider geography with a large population (West). Specifically disappointed to see that the Sepulveda Pass project will not be finished in time for the 2028 Olympics - I would love to see Metro form a public/private partnership and/or redouble their internal efforts to bring this project to fruition before the Olympics arrive.	<p>Metro's transit capital expansion program includes the most aggressive expansion of light rail and heavy rail in the country. We are committed to bringing high quality transit to as many residents as possible; however, we realize that we cannot have rail stations and rail lines everywhere. Metro is working to provide first and last mile connectivity to our rail stations and, working with our partners, to offer high quality bus service where we do not have rail. Furthermore, the final station locations and alignments of the rail lines included in the LRTP are subject to change during the environmental planning phases of the project development.</p> <p>The final alignment and station location for rail projects included in the LRTP are subject to change during the environmental planning phase of the project development. We will pass along this comment to the project team and we encourage you to provide additional project-specific feedback at: <a href="http://www.metro.net/projects">www.metro.net/projects</a>.</p>
David	173	Hey Metro LA, First off, thanks for putting this plan together! There's a lot to love here but I want to focus on a few things I'd like to see changed. 1. Expedite BRT and protected bike lane projects since they can have the biggest impact at the lowest cost. 2. Many of the project completion dates are years, even decades away. We can do better! 3. Please please PLEASE don't move forward with any highway widening projects. We know they don't help with climate goals, and they also create more congestion and only make things worse. The next LA should discourage driving while creating affordable and efficient alternatives (BRT, rail, biking, and high density housing). Keep up the awesome work! David	<p>Metro is committed to building a World Class Bus system. Improvements planned for the system include those to enhance the customer experience, improve the system operations, and to provide reliable access to riders where and when they need to travel. We recognize that the transit system has lost ridership over the last several years and are committed to improving our bus service. Through our NextGen Bus Plan, Metro is redesigning our entire bus network and these changes will be implemented over the next 18 months. Working with local partners, Metro is exploring projects to improve bus speed and reliability in congested corridors. Additional efforts to improve customer experience, including safety and security, are underway as well.</p> <p>The LRTP's investment plan is built upon previous efforts and the Metro Board's previous directives. The Measure M expenditure plan was developed with significant public input and was passed by over 70% of LA County voters, and much of the funding allocated for projects and programs included in the LRTP was written into the Measure M statute. Metro must balance environmental sustainability and equity imperatives with the realism that our roadway transportation system is still crucially important for regional mobility. While there is an urgent need to provide more sustainable transportation options, we will seek to modernize and better utilize our roadways. We will share this comment with the appropriate departments within Metro.</p>

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Kiat	175	Please consider bringing forward the projected completion date of the Crenshaw Northern Extension from 2047 to a timeline within the next decade. West Hollywood strongly supports bringing rail transit to the city and making it accessible for all, not just the privileged few with cars. Thank you.	The phasing and schedule of the capital projects included in the LRTP were based on the Measure M expenditure plan. During the development of the Measure M expenditure plan, project readiness was considered along with the performance of the project relative to similar capital projects. Metro is exploring opportunities to accelerate projects, using public-private partnerships and other mechanisms, and would like to see these projects in service sooner. The Short Range Transportation Plan, to be completed following the LRTP, will re-evaluate the financial realities facing LA County over the next decade and will provide an opportunity for Metro and our partners to examine the prioritization of funding.
Scott	177	My priority for light rail is to make the subway and other lines more hospitable to paying riders by removing the homeless, fare jumpers, and other threats. I love the holistic plan and all of the expanded light rail, and want people to feel good about riding, thereby increasing more ridership. But with threats, poorly lit stations, cops who don't seem to deal with the problem, it makes timid people like my parents or some friends not even consider the Metro.	Safety of our riders is our number one priority. Metro is committed to maintaining a safe and secure transit system, while balancing our the community concerns surrounding policing, homelessness, and customer experience. Thank you for your feedback and we will share this comment with the appropriate department within Metro.
Matthew	178	The long range transportation plan has many promising aspects that give me hope for the transit future of Los Angeles. I would stress a few priorities among the myriad proposals here: 1) Accelerate the construction of the Sepulveda Pass Transit Corridor all the way to LAX as much as possible--I think this project is the cornerstone to changing the commuting landscape of Los Angeles, so I would devote the most time and effort to getting this project done this decade. The LAX People Mover connecting to the Crenshaw Line is good, but a heavy rail line that connects the SFV to the airport (linking with the Orange Line, Purple Line, and Expo Line along the way) will be transformative. 2) I also think that two of the Crenshaw Line northern extension proposals should be built. The La Brea route would be the fastest, most direct connection to Hollywood, so it should be built. However, I think a new line should be built that goes through West Hollywood and then continues on down to Venice Beach, linking up with Downtown Culver along the	The phasing and schedule of the capital projects included in the LRTP were based on the Measure M expenditure plan. During the development of the Measure M expenditure plan, project readiness was considered along with the performance of the project relative to similar capital projects. Metro is exploring opportunities to accelerate projects, using public-private partnerships and other mechanisms, and would like to see these projects in service sooner. The Short Range Transportation Plan, to be completed following the LRTP, will re-evaluate the financial realities facing LA County over the next decade and will provide an opportunity for Metro and our partners to examine the prioritization of funding.
			Addressing historical inequities is a guiding principle for the LRTP and a core tenet for Metro's current planning activities. Metro's Equity Platform will help guide future planning studies and investment decisions.
David	180	i will Never Use a BUS. I need to get from glendale to Expo Park in under 1 hour driving is 35 minutes. 50 minutes is acceptable. NOW i must go to north hollywood or pasadena to get to expo park. if i take bus only its 1:30 minutes. I NEED EXPRESS offering, and I spend 1 gallon on gas per day i am willing to pay more BUT not pay more and go slower. i need LESS transfers. MY time at home watching TV is worth more then. sitting on a bench and just waiting to get on a bus thats not often enough and isnt cheap enough.	Metro's transit capital expansion program includes the most aggressive expansion of light rail and heavy rail in the country. We are committed to bringing high quality transit to as many residents as possible; however, we realize that we cannot have rail stations and rail lines everywhere. Metro is working to provide first and last mile connectivity to our rail stations and, working with our partners, to offer high quality bus service where we do not have rail. Furthermore, the final station locations and alignments of the rail lines included in the LRTP are subject to change during the environmental planning phases of the project development.
			Metro is committed to building a World Class Bus system. Improvements planned for the system include those to enhance the customer experience, improve the system operations, and to provide reliable access to riders where and when they need to travel. We recognize that the transit system has lost ridership over the last several years and are committed to improving our bus service. Through our NextGen Bus Plan, Metro is redesigning our entire bus network and these changes will be implemented over the next 18 months. Working with local partners, Metro is exploring projects to improve bus speed and reliability in congested corridors. Additional efforts to improve customer experience, including safety and security, are underway as well.

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Name	#	Comment Received	Response
Joel	181	Expansion of Public Transportation is a critical and essential component to the prosperity and green environmental goals of the city of Los Angeles, and the County as a whole. Our reliance on fossil fuels is unsustainable. The only issue with funding is that I would like to see a minimal reliance or none at all from residential property tax initiatives. Residential Property tax is already overburdened. Thanks!	Comment noted.
Adolfo	182	At the intersection of the Sepulveda Transit Corridor Project and the Purple Line Extension 3, in Westwood, there should be another line that connects the Westside to Line E in order to connect the Valley and the Westside to the LAX. If not LAX, then why isn't there a connection to the E line. This would leave it at approximately the intersection of the 10 and the 405 freeway. This would better connect our transit and provide more options for individuals commuting from the lower-income neighborhoods to the the wealthier neighborhoods. It would also reduce congestion on the westside rather than deter people who would think they have to travel to DTLA for a line transfer.	Metro's transit capital expansion program includes the most aggressive expansion of light rail and heavy rail in the country. We are committed to bringing high quality transit to as many residents as possible; however, we realize that we cannot have rail stations and rail lines everywhere. Metro is working to provide first and last mile connectivity to our rail stations and, working with our partners, to offer high quality bus service where we do not have rail. Furthermore, the final station locations and alignments of the rail lines included in the LRTP are subject to change during the environmental planning phases of the project development.
David Hugh	183	Support the draft. The orientation towards moving people...as opposed to cars is the right evolution of transportation thinking. Prioritizing moving people, prioritizing pedestrians, building safe bike lanes - yes, yes, and yes.	Comment noted.
Jon	184	Please continue to prioritize bus-only lanes in high volume corridors, and active transportation options to/from rail stations and in more localized routes in cities across the county.	Metro is committed to building a World Class Bus system. Improvements planned for the system include those to enhance the customer experience, improve the system operations, and to provide reliable access to riders where and when they need to travel. We recognize that the transit system has lost ridership over the last several years and are committed to improving our bus service. Through our NextGen Bus Plan, Metro is redesigning our entire bus network and these changes will be implemented over the next 18 months. Working with local partners, Metro is exploring projects to improve bus speed and reliability in congested corridors. Additional efforts to improve customer experience, including safety and security, are underway as well.
Shiraz	185	Increase development and funding of first-mile/last-mile solutions to enhance connections to regional transit. Streetcars and other connector projects should be prioritized.	Metro's transit capital expansion program includes the most aggressive expansion of light rail and heavy rail in the country. We are committed to bringing high quality transit to as many residents as possible; however, we realize that we cannot have rail stations and rail lines everywhere. Metro is working to provide first and last mile connectivity to our rail stations and, working with our partners, to offer high quality bus service where we do not have rail. Furthermore, the final station locations and alignments of the rail lines included in the LRTP are subject to change during the environmental planning phases of the project development.
Ken	186	It's important to me to see an electric train connect the westside to the San Fernando Valley. Also, it would be great to see an electric train connect Union Station to Bakersfield Amtrak. (I know this second request is not you, but I still wanted to include it.)	Metro's transit capital expansion program includes the most aggressive expansion of light rail and heavy rail in the country. We are committed to bringing high quality transit to as many residents as possible; however, we realize that we cannot have rail stations and rail lines everywhere. Metro is working to provide first and last mile connectivity to our rail stations and, working with our partners, to offer high quality bus service where we do not have rail. Furthermore, the final station locations and alignments of the rail lines included in the LRTP are subject to change during the environmental planning phases of the project development.

## Attachment C – LRTP Public Comment Response Matrix

### Public Comments

Name	#	Comment Received	Response
Tobias	187	Hi there,I'm super excited to see our serious commitment to building a worthy transit system for LA. However, I'm a bit dismayed that there seems to be no serious plan to integrate bicycling infrastructure into our city. Due to COVID, more and more people are discovering that LA could be the perfect place to get around on bike. It's mostly sunny and flat, and you can get to lots of places within 10 minutes on a bike. But truth is, biking in LA is dangerous. I started getting around a lot on bike and it's scary! I would love if we could learn from European cities and think of biking as a serious form of transportation and build adequate infrastructure for getting around on bikes.Many thanks,Tobias	Metro recognizes that active transportation is a vital component of the multi-modal transportation system. Bicycling and walking are important first and last mile modes to support the expansion of transit usage and offer their own public health and environmental benefits. The LRTP details several regionally significant major multiuse paths as well as the many policies and programs that Metro has established to support active transportation, complete streets, and first and last mile connectivity. Most investment decisions for active transportation happens within local jurisdictions, and therefore, Metro will work with our local partners to improve bicycle and pedestrian travel within LA County. Metro encourages stakeholders to provide your feedback directly to local and regional governments as well as to Metro on future planning efforts.
David	188	I regularly ride the green and blue lines.I am all for decreasing traffic and greenhouse gases and increasing metro ridership. Please make riders feel safer... lots of homeless and things riding metro, which deters most women and many men.I am a physically fit white Male and most thugs dont mess with me.However I do feel uncomfortable at times.	In spring 2016, at the direction of our CEO, Metro created a Homeless Task Force to address homelessness in and around the transit system and align action with County and City of Los Angeles priorities. In February 2017, the Homeless Action Plan was finalized. The Action Plan's goals are threefold: 1. to enhance the customer experience; 2. maintain a safe and secure system; and, 3. connect homeless persons in the transit system to services and resources under Measures H and HHH. Metro continues to expand efforts in this area.
Dianna	189	Excellent comprehensive long range plan. I like the TOC encouragement as well as support for low income and disabled. Incentives and funding through paid access to HOV lanes which support people taking transit is strategic! Safety on Metrolink and buses is a high priority for drivers and passengers. With pedal assist electric bike purchases on the rise the ability to access transit and transport both rider and bike are important. Thank you for sharing this, it's overdue yet exciting!	Comment noted.
Rochelle	190	At the moment, the absence of police/protection on the trains is very concerning. There's a lot of violence and attacks on citizens. I will not ride the metro because I am fearful for being assaulted because of my race. Seniors are being assaulted regularly by mentally disturbed people. You give a very long phone number to call. Who's going to remember that? How about a 1-3 digit emergency number instead?In addition, the outdoor train tracks are filthy. It appears they are never cleaned. People seem to drop all sorts of trash over the side of the platforms, including food, clothing, broken glass, food containers and much more. Stations and tracks need to be cleaned regularly. I walk my dog next to the LATCC station. I have to carry my dog because I'm afraid he will step on glass or pick up something. Thank you. I hope you can make the metro safer and cleaner so I can rejoin my fellow LA family.	<p>Safety of our riders is our number one priority. Metro is committed to maintaining a safe and secure transit system, while balancing our the community concerns surrounding policing, homelessness, and customer experience. Thank you for your feedback and we will share this comment with the appropriate department within Metro.</p> <p>In spring 2016, at the direction of our CEO, Metro created a Homeless Task Force to address homelessness in and around the transit system and align action with County and City of Los Angeles priorities. In February 2017, the Homeless Action Plan was finalized. The Action Plan's goals are threefold: 1. to enhance the customer experience; 2. maintain a safe and secure system; and, 3. connect homeless persons in the transit system to services and resources under Measures H and HHH. Metro continues to expand efforts in this area.</p>
Benjamin	191	Why can't more of the budget be allocated to highways? This is what the majority of tax payers prefer.	The LRTP's investment plan is built upon previous efforts and the Metro Board's previous directives. The Measure M expenditure plan was developed with significant public input and was passed by over 70% of LA County voters, and much of the funding allocated for projects and programs included in the LRTP was written into the Measure M statute. Metro must balance environmental sustainability and equity imperatives with the realism that our roadway transportation system is still crucially important for regional mobility.

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Name	#	Comment Received	Response
Kevin	192	I strongly support the active transportation elements of the Plan. Please add the following:1) Metro's support for 'Open Streets' events in cities throughout L.A. County2) Metro's support for bicycle education through the 'Metro Best' or similar programs3) Metro's work with L.A. County and cities to assemble a bikeway map for L.A. county (describe and include the map, which was just updated)4) Metro's ongoing program to provide for bicycle transportation on buses, including converting to three-position bike racks.	Metro recognizes that active transportation is a vital component of the multi-modal transportation system. Bicycling and walking are important first and last mile modes to support the expansion of transit usage and offer their own public health and environmental benefits. The LRTP details several regionally significant major multiuse paths as well as the many policies and programs that Metro has established to support active transportation, complete streets, and first and last mile connectivity. Most investment decisions for active transportation happens within local jurisdictions, and therefore, Metro will work with our local partners to improve bicycle and pedestrian travel within LA County. Metro encourages stakeholders to provide your feedback directly to local and regional governments as well as to Metro on future planning efforts.
Ray	193	For pandemics or other highly contagious endemics in large cities like L.A. we may need to partition rail cars and buses into ventilation zones. One zone for external ventilation only, no air shared from the rest of the car. Another zone for those with known contagious ailments, those that are seeking help in clinics or hospitals and have no other means of transportation. We may also need to limit capacity for safety. No standing. Only one per seat.	The LRTP was developed prior to the onset of the COVID-19 pandemic. The LRTP will include a new discussion of the COVID-19 pandemic and the variety of impacts it has on the contents of the LRTP, including the impacts on Metro's financials, operations, and other efforts. The LRTP is the 30-year plan for Los Angeles County. The near-term strategies and actions are to be determined and will be documented in the Short-Range Transportation Plan (S RTP). The LRTP is a living document that will be amended as necessary as the county's priorities change and as financial, technological, or demographic changes warrant updates to the plan. The LRTP will include a new discussion of the COVID-19 pandemic and the variety of impacts it has on the contents of the LRTP. The new financial realities facing LA Metro will be explored extensively over the next several years and will be documented in the S RTP.
Michael	194	(1) Is Lincoln Heights an EFC? Equity Focus Communities As part of the LRTP, Metro has defined "Equity Focus Communities" (EFCs). These communities represent geographic areas that have the following socioeconomic characteristics; more than 40% of households are low-income and either 80% of households are non-white or 10% have no access to a vehicle. Collectively, these areas represent about 30% of the county's population. EFCs are communities that have experienced historic disinvestments, reduced access to opportunity and housing, and policy decisions that have resulted in environmental justice disparities. As such, these communities have higher degree of	Addressing historical inequities is a guiding principle for the LRTP and a core tenet for Metro's current planning activities. Metro's Equity Platform will help guide future planning studies and investment decisions.  The final alignment and station location for rail projects included in the LRTP are subject to change during the environmental planning phase of the project development. We will pass along this comment to the project team and we encourage you to provide additional project-specific feedback at: <a href="http://www.metro.net/projects">www.metro.net/projects</a> .
Kendall	195	I'm concerned that the highway transformation plans are not going to be good for everyone. Highways have historically been used to physically separate communities in order to impoverish communities of color. There is also much concern about the health effects of living next to a highway, where noxious particulate matter is heaviest concentrated. Yet land developers have used land next to highways to provide low-income housing to BIPOC, especially in LA. Finally, highway expansion only helps further climate change, as people use the space they're given. I would love details on how this plan will not only not HARM BIPOC, but actively HELP them instead. Also, the highway plan needs to be more comprehensive than solely lane expansion on certain segments. If Metro has access highway Right of Way, then the Long-Range Transportation Plan needs to treat the highways as a complete system, rather than in segments. And if the highway plan as is cannot visibly help communities of color, and is actively harming the environment, there needs to be a complete shift in that part of the plan. Thank you for	Addressing historical inequities is a guiding principle for the LRTP and a core tenet for Metro's current planning activities. Metro's Equity Platform will help guide future planning studies and investment decisions.  The LRTP's investment plan is built upon previous efforts and the Metro Board's previous directives. The Measure M expenditure plan was developed with significant public input and was passed by over 70% of LA County voters, and much of the funding allocated for projects and programs included in the LRTP was written into the Measure M statute. Metro must balance environmental sustainability and equity imperatives with the realism that our roadway transportation system is still crucially important for regional mobility. While there is an urgent need to provide more sustainable transportation options, we will seek to modernize and better utilize our roadways. We will share this comment with the appropriate departments within Metro.

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Claudia	196	<p>1 • Bus stops shouldn't be located in a corner, this backs up traffic from being able to turn right thus increasing congestion. It would be nice to have room to pass the buses. 2</p> <p>• I notice that riders and Metro / Bus drivers don't have a seat at the table. Which is puzzling because they are the ones with boots on the ground. 3 • Crossing of bike lanes and busses and ride share pick up is dangerous. There has to be a better way. Thank you!</p>	<p>Metro is committed to building a World Class Bus system. Improvements planned for the system include those to enhance the customer experience, improve the system operations, and to provide reliable access to riders where and when they need to travel. We recognize that the transit system has lost ridership over the last several years and are committed to improving our bus service. Through our NextGen Bus Plan, Metro is redesigning our entire bus network and these changes will be implemented over the next 18 months. Working with local partners, Metro is exploring projects to improve bus speed and reliability in congested corridors. Additional efforts to improve customer experience, including safety and security, are underway as well.</p>
Paul	197	<p>I think one of the problems why a lot of people choose to drive is because the metro link is dirty. There's a lot of homeless people sleeping on the train and it stinks. Also metro stations need more bike lockers.</p>	<p>In spring 2016, at the direction of our CEO, Metro created a Homeless Task Force to address homelessness in and around the transit system and align action with County and City of Los Angeles priorities. In February 2017, the Homeless Action Plan was finalized. The Action Plan's goals are threefold: 1. to enhance the customer experience; 2. maintain a safe and secure system; and, 3. connect homeless persons in the transit system to services and resources under Measures H and HHH. Metro continues to expand efforts in this area.</p>
Anthony	198	<p>Hello. There were a few concerns which I don't think were touched upon in the plan and which are of a concern to me as a mid-age professional (36 yrs). I've been speaking with colleagues about public transportation and I believe that ridership levels will increase if these concerns are addressed: 1. Sanitation. We've all heard the stories. I've felt it, I've smelled it. I don't think I need to go into detail about this. Perhaps more cleaning crews that work on a part-time basis so that the county can avoid footing the additional cost of hiring full-timers? I prefer full-timers because I believe everyone deserves a decent-wage job, but I realize that budgets and politics get in the way. Homelessness decreases sanitation on the system. My understanding is that a federal court has not obligated the county/city to house all homeless individuals? Perhaps this will help change the landscape. 2. Bathrooms. I understand that American cities are not very good about restrooms in public spaces, but I think that it is really important and goes hand-in-hand with sanitation. The biggest reason is maintenance cost, correct? I've seen a sort of buffed-steel used in elevators. This material is intended to prevent vandalism. I would like Metro to consider the viability of constructing public restrooms entirely with this</p>	<p>In spring 2016, at the direction of our CEO, Metro created a Homeless Task Force to address homelessness in and around the transit system and align action with County and City of Los Angeles priorities. In February 2017, the Homeless Action Plan was finalized. The Action Plan's goals are threefold: 1. to enhance the customer experience; 2. maintain a safe and secure system; and, 3. connect homeless persons in the transit system to services and resources under Measures H and HHH. Metro continues to expand efforts in this area.</p> <p>Metro's transit capital expansion program includes the most aggressive expansion of light rail and heavy rail in the country. We are committed to bringing high quality transit to as many residents as possible; however, we realize that we cannot have rail stations and rail lines everywhere. Metro is working to provide first and last mile connectivity to our rail stations and, working with our partners, to offer high quality bus service where we do not have rail. Furthermore, the final station locations and alignments of the rail lines included in the LRTP are subject to change during the environmental planning phases of the project development.</p>
Ryan	200	<p>I would like to voice my complete support for the proposed VMT tax, as well as voice my complete objection to any and all freeway widening proposals. Induced demand would not only worsen traffic and reduce transit efficiency along those routes, but also damage the physical structure of surrounding neighborhoods, increase potential for traffic fatalities and worsen air quality. We must pursue a diversity of tactics to actively end the primacy of the automobile in our region, and that includes denying any and all road widening or lane additions.</p>	<p>The LRTP's investment plan is built upon previous efforts and the Metro Board's previous directives. The Measure M expenditure plan was developed with significant public input and was passed by over 70% of LA County voters, and much of the funding allocated for projects and programs included in the LRTP was written into the Measure M statute. Metro must balance environmental sustainability and equity imperatives with the realism that our roadway transportation system is still crucially important for regional mobility. While there is an urgent need to provide more sustainable transportation options, we will seek to modernize and better utilize our roadways. We will share this comment with the appropriate departments within Metro.</p>



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			Metro is exploring road pricing as an option for reducing congestion, while at the same time providing alternatives to driving. Our Traffic Reduction Study is currently studying several pricing mechanisms and complimentary mobility improvement in select candidate corridors; however, the specifics of the recommendations stemming from the study are unknown at the moment.
Stephen	201	I am totally against congestion pricing and the proposed study west of the 405. I live east of the 405, I own property west of the 405 as well as my bank, mail, post office are located west of the 405 in Brentwood. My child and grandchildren live west of 20th Street in Santa Monica. This is an arbitrary exercise and unfair to myself, as I approach 80 years old. What exceptions will there be?	Metro is exploring road pricing as an option for reducing congestion, while at the same time providing alternatives to driving. Our Traffic Reduction Study is currently studying several pricing mechanisms and complimentary mobility improvement in select candidate corridors; however, the specifics of the recommendations stemming from the study are unknown at the moment.
Shannon	203	I support greater investment in bike/pedestrian and complete streets infrastructure, in addition to exclusive bike lanes. I think we need to be taking more space in our city back from single occupancy vehicles to create a more equitable city with a greater quality of living. I think we should work towards a bicycle network of fully protected lanes that connects the county, in the same way we are building out a fully connected rail network. A rail and bike network would complement one another, and truly give Angelenos a choice for a car-free lifestyle.	Metro recognizes that active transportation is a vital component of the multi-modal transportation system. Bicycling and walking are important first and last mile modes to support the expansion of transit usage and offer their own public health and environmental benefits. The LRTP details several regionally significant major multiuse paths as well as the many policies and programs that Metro has established to support active transportation, complete streets, and first and last mile connectivity. Most investment decisions for active transportation happens within local jurisdictions, and therefore, Metro will work with our local partners to improve bicycle and pedestrian travel within LA County. Metro encourages stakeholders to provide your feedback directly to local and regional governments as well as to Metro on future planning efforts.
Anant	205	The main problem with this is how much money is still being invested in highways. Divert money away from major highway investments into accelerating the timelines on transit projects in order to give Los Angelenos true options for mobility in the city. Seeing as SB288 could potentially exempt "sustainable" transportation projects from challenges under CEQA, would the passing of this legislation speed up the timeline and cut down on costs for transit construction projects? I noticed that the 28 by 28 seems to be thrown out the window, and I'm just curious about what other strategies LA could use to create a better transit network faster. For long term light-rail projects, it also feels like the timelines are too long and the investment needed is too high. Why can't the proposals address this through the tactical, rapid deployment of protected BRT lines that emulate light rail, whereupon trends in ridership can influence on a more ad-hoc basis which lines should be converted to permanent light rail. BRT lane creation would also begin the process of demarcating space for future light rail, promote more ridership on the metro network, and spread out upfront investments into light rail (e.g. some grade separations and stations can be developed independently overtime with the intention of laying down tracks at a later date; thereby, spreading out the costs of light rail implementation over stages). Does LA metro also have any plans to pursue private partnerships and financing	<p>Metro's transit capital expansion program includes the most aggressive expansion of light rail and heavy rail in the country. We are committed to bringing high quality transit to as many residents as possible; however, we realize that we cannot have rail stations and rail lines everywhere. Metro is working to provide first and last mile connectivity to our rail stations and, working with our partners, to offer high quality bus service where we do not have rail. Furthermore, the final station locations and alignments of the rail lines included in the LRTP are subject to change during the environmental planning phases of the project development.</p> <p>The phasing and schedule of the capital projects included in the LRTP were based on the Measure M expenditure plan. During the development of the Measure M expenditure plan, project readiness was considered along with the performance of the project relative to similar capital projects. Metro is exploring opportunities to accelerate projects, using public-private partnerships and other mechanisms, and would like to see these projects in service sooner. The Short Range Transportation Plan, to be completed following the LRTP, will re-evaluate the financial realities facing LA County over the next decade and will provide an opportunity for Metro and our partners to examine the prioritization of funding.</p>
Peter	206	Thank you for putting this together. Here are my comments: 1. The front page (and pg. 42) advertises the benefits of the plan re: lowering vehicle travel times, but when SB 743 finally goes into effect this year, future state transit projects will use VMT as a metric rather than travel time. I think the report should highlight up front that transit investments mean less car miles traveled, and advertise that this is good re: climate	Sustainability is a guiding principle in this LRTP and a foundational element of our activities. Metro believes that environmental sustainability should carry through to each project, program, and policy. The LRTP details several specific strategies to address sustainability and our new report that will be published soon, Moving Beyond Sustainability, provides greater detail on how Metro will lead in sustainability.

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		change. 2. Some of the "Open Year" prognostications on page 20 seem very very far away (2057 for Westside to LAX corridor?). :(3. The MicroTransit Service Delivery model (Strategy 1.5) will always be scope-limited if your imagination doesn't reach past Uber/Lyft rideshare paradigms. I worked on micro-transit system designs for a self-driving car startup, and I found that impactful projects require a LOT of data, many of it gleaned from dis-aggregated cell phone GPS tracking in ways that mask population movements in poorer communities. It will also require a heavy investment in "smart" street sensing equipment, and won't really lower VMT if you are using single passenger sedans. Point-to-point mobility can also include scooters and bikes! 4. Strat 1.7b is already anachronistic, given the desire of the public and elected officials to reduce LAPD presence on METRO (and the high cost of the overtime involved). The city's Ad Hoc Committee on Black People Experiencing Homelessness highlighted the inequitable effects of policing on homeless POC in Dec 2018, and recommended that overarching funding priorities be adjusted to reduce armed officer interactions with homeless persons in favor of social service outreach.5. My constituents who are experiencing homelessness (I am on a Neighborhood Council) complain to me that they are harassed for loitering in light rail stations and trains, and acknowledge that they lose their TAP	<p>Metro is committed to building a World Class Bus system. Improvements planned for the system include those to enhance the customer experience, improve the system operations, and to provide reliable access to riders where and when they need to travel. We recognize that the transit system has lost ridership over the last several years and are committed to improving our bus service. Through our NextGen Bus Plan, Metro is redesigning our entire bus network and these changes will be implemented over the next 18 months. Working with local partners, Metro is exploring projects to improve bus speed and reliability in congested corridors. Additional efforts to improve customer experience, including safety and security, are underway as well.</p> <p>In spring 2016, at the direction of our CEO, Metro created a Homeless Task Force to address homelessness in and around the transit system and align action with County and City of Los Angeles priorities. In February 2017, the Homeless Action Plan was finalized. The Action Plan's goals are threefold: 1. to enhance the customer experience; 2. maintain a safe and secure system; and, 3. connect homeless persons in the transit system to services and resources under Measures H and HHH. Metro continues to expand efforts in this area.</p>
Lee	208	I support this project! I appreciate the thought put into women passengers (more of them take the bus than trains). Please also continue to reach out to underserved communities in our cities. Often those folks are not going to have the time and means to look at your plans and comment. We need a more equitable plan. Thanks.	Addressing historical inequities is a guiding principle for the LRTP and a core tenet for Metro's current planning activities. Metro's Equity Platform will help guide future planning studies and investment decisions.
Kevin	209	The way the MTA is going is great, yet they fail to remember or realize a great majority of their employees and riders live and commute from as far as Beaumont, CA. I personally commute from Moreno Valley and the Metro Link is reliable but not who I work for or trust. It would be very nice for the Metro light rail or heavy rail to move East. If it can go to the beach, why can't it go to the IE. It would link the Ontario Airport as well as Ontario Mill Mall and other Inland Empire sights and businesses in the Metro coverage and not to mention jobs, jobs, jobs!! do know CV-19 has put a big stop to construction but nice to know it is heard and being acted on. So please IF the time I put into responding to this request for input. Please let me know this has been tabled with the movers and shakers of the MTA. smithke@metro.net	Metro's transit capital expansion program includes the most aggressive expansion of light rail and heavy rail in the country. We are committed to bringing high quality transit to as many residents as possible; however, we realize that we cannot have rail stations and rail lines everywhere. Metro is working to provide first and last mile connectivity to our rail stations and, working with our partners, to offer high quality bus service where we do not have rail. Furthermore, the final station locations and alignments of the rail lines included in the LRTP are subject to change during the environmental planning phases of the project development.
Christine	210	Dear Whom It May Concern,I am absolutely against imposing any type of congestion \$4 fee in order to get on a freeway from Santa Monica/West La. Why should I be penalized on days when I am unable to work remotely from home and am required to appear in Court, usually downtown. I do not believe that this will be an efficient way to discourage people from utilizing freeways - rather it is a way to punish yet again the middle class and the poort. Please refrain from enacting a congestion fee. Sincerely,Christine Twining Outwater	Metro is exploring road pricing as an option for reducing congestion, while at the same time providing alternatives to driving. Our Traffic Reduction Study is currently studying several pricing mechanisms and complimentary mobility improvement in select candidate corridors; however, the specifics of the recommendations stemming from the study are unknown at the moment.
Jim	211	St Bernadette Church - Baldwin Hills Looks Great!You have our full support. Deacon Jim	Comment noted.
Stoney	212	I support any and all reductions in CO2, needless traffic and inefficient single car culture. This is a great plan and we Angelinos support it whole heartedly.	Comment noted.

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Name	#	Comment Received	Response
Roy	213	I live in Montecito Heights in Northeast LA. We have a bike lane in the Arroyo Seco channel that does not connect to anything. If the bike path could connect to the LA River bike path at the Confluence, thousands of people would have a safe bike alternative to get in and out of DTLA. This feels like a small thing that would make a big difference. Thank you.	Metro recognizes that active transportation is a vital component of the multi-modal transportation system. Bicycling and walking are important first and last mile modes to support the expansion of transit usage and offer their own public health and environmental benefits. The LRTP details several regionally significant major multiuse paths as well as the many policies and programs that Metro has established to support active transportation, complete streets, and first and last mile connectivity. Most investment decisions for active transportation happens within local jurisdictions, and therefore, Metro will work with our local partners to improve bicycle and pedestrian travel within LA County. Metro encourages stakeholders to provide your feedback directly to local and regional governments as well as to Metro on future planning efforts.
Chris	323	Here are my thoughts on the Long Range Transit Plan. I'm just an interested and concerned citizen. *No Commute Mode Share Goals* I don't see commute mode share as a progress metric in this plan. We've got to get people out of their cars, for every societal goal we have. LA's commute mode share as of 2017 (the most recent data provided by <a href="https://data.lacounty.gov/Transportation/Commute-Mode-Share-in-LA-County-2005-2017-/y7mn-ys78">https://data.lacounty.gov/Transportation/Commute-Mode-Share-in-LA-County-2005-2017-/y7mn-ys78</a> ) was 79% drove alone and 10% carpool. That is 89% commuting in private automobile. Vancouver's private automobile mode share is 47% ( <a href="https://dailyhive.com/vancouver/vancouver-active-transportation-mode-share-report-2019">https://dailyhive.com/vancouver/vancouver-active-transportation-mode-share-report-2019</a> ). Driving this number down should be a primary objective and progress metric. *People are still dying on LA's streets and no one is willing to inconvenience drivers to save lives* Cyclist and Pedestrian deaths are up, not down. ( <a href="https://www.latimes.com/local/lanow/la-me-ln-traffic-deaths-bike-pedestrian-los-angeles-vision-zero-20190425-story.html">https://www.latimes.com/local/lanow/la-me-ln-traffic-deaths-bike-pedestrian-los-angeles-vision-zero-20190425-story.html</a> ) LA needs to prioritize people's safety over drivers' convenience. The car culture here is killing people. I don't see much of a plan for this. *Automate speed and traffic enforcement* The technology exists to automate much of speed and traffic enforcement. We should use it everywhere. This will reduce unnecessary encounters with police and help the laws be enforced uniformly without class or racial bias. It will also make streets safer and help change the culture here, because now people drive with a sense of impunity. <a href="https://dpw.lacounty.gov/Traffic/AutoRedLight.cfm">https://dpw.lacounty.gov/Traffic/AutoRedLight.cfm</a> *Get rid of 85th percentile speed limits* It's an insane policy.	<p>Metro is committed to building a World Class Bus system. Improvements planned for the system include those to enhance the customer experience, improve the system operations, and to provide reliable access to riders where and when they need to travel. We recognize that the transit system has lost ridership over the last several years and are committed to improving our bus service. Through our NextGen Bus Plan, Metro is redesigning our entire bus network and these changes will be implemented over the next 18 months. Working with local partners, Metro is exploring projects to improve bus speed and reliability in congested corridors. Additional efforts to improve customer experience, including safety and security, are underway as well.</p> <p>Metro recognizes that active transportation is a vital component of the multi-modal transportation system. Bicycling and walking are important first and last mile modes to support the expansion of transit usage and offer their own public health and environmental benefits. The LRTP details several regionally significant major multiuse paths as well as the many policies and programs that Metro has established to support active transportation, complete streets, and first and last mile connectivity. Most investment decisions for active transportation happens within local jurisdictions, and therefore, Metro will work with our local partners to improve bicycle and pedestrian travel within LA County. Metro encourages stakeholders to provide your feedback directly to local and regional governments as well as to Metro on future planning efforts.</p>
Elizabeth	324	At this point, the impact of COVID-19 on ridership, traffic patterns, and how people live, work and attend school is unknown. Therefore, Metro should declare a moratorium on any part of the plan that relies on or assumes an increase in transit ridership, e.g. Transit Oriented Communities zoning. Efforts to increase the speed and reliability of the Metro system should continue. Best regards, Elizabeth Pollock eliz.pollock@gmail.com 11923 Bray Street Culver City, CA 90230 Mobile: (310) 699-5165	The LRTP was developed prior to the onset of the COVID-19 pandemic. The LRTP will include a new discussion of the COVID-19 pandemic and the variety of impacts it has on the contents of the LRTP, including the impacts on Metro's financials, operations, and other efforts. The LRTP is the 30-year plan for Los Angeles County. The near-term strategies and actions are to be determined and will be documented in the Short-Range Transportation Plan (S RTP). The LRTP is a living document that will be amended as necessary as the county's priorities change and as financial, technological, or demographic changes warrant updates to the plan. The LRTP will include a new discussion of the COVID-19 pandemic and the variety of impacts it has on the contents of the LRTP. The new financial realities facing LA Metro will be explored extensively over the next several years and will be documented in the S RTP.

## Attachment C – LRTP Public Comment Response Matrix

### Public Comments

Name	#	Comment Received	Response
Flavia	326	<p>To Those Interested in the Planning for State Route 138,</p> <p>I am writing today as a resident of the rural community of Neenach. I drive State Route 138 regularly as it is the only route providing access to our home. This route is heavily travelled by large trucks, having been designated an alternate truck route a few years ago. This narrow, two-lane rural highway was not originally built to carry such a volume of heavy loads and the pavement has been broken up for sometime. Thankfully, the road resurfacing is in progress.</p> <p>However the resurfacing, while much appreciated by all who drive this road, does not address the serious safety concerns on this route.</p> <ol style="list-style-type: none"> <li>1. There are only two intersections with left turn lanes in the section between the I - 5 Freeway and the 14.</li> <li>2. There are no passing lanes and frustrated drivers stuck in long lines behind trucks recklessly pass causing deadly head on collisions with oncoming traffic and many near misses where the oncoming vehicle has to veer off the road into the ditch. The recent addition of guard rails block an escape route in this situation.</li> <li>3. There is poor drainage resulting in standing water on the road causing one to hydroplane out of control if you don't see it soon enough to slow. This is particularly dangerous if a big truck is oncoming.</li> </ol> <p>I personally have experienced many times trying to make a left turn on to La Petite with</p>	<p>The scope, design, schedule, and phases of specific projects are not addressed in the LRTP. These elements will be addressed during the environmental planning phase of the project development and there will be additional opportunities to contribute feedback at that time. We will pass along this comment to the project team and we encourage you to provide additional project-specific feedback at: <a href="http://www.metro.net/projects">www.metro.net/projects</a>.</p>
Denise	328	<p>Good morning....</p> <p>Highway 138 through the westernmost part of the Antelope Valley is not like other rural highways. This highway has its own set of characteristics that make it unique. These qualities all require a little bit of extra attention.</p> <p>We have an uncountable amount of semi trucks hauling goods. We have daily commuters between AV , SCV, and Bakersfield. We have beautiful wildflowers bringing the day trippers. We have hikers using the Pacific Crest Trail. Not to forget about our local town residential traffic. All of these things have to be considered in the creation of a long term plan.</p> <p>I will do my best to assist in any way I can. Accidents happen! They don't always need to! Just those little things Mr Zimmerman mentioned can prevent needless accidents and help keep our little town of Neenach safer.</p> <p>Thank you for your time, Denise Shippy Public Safety Coordinator/Oso-Neenach. Town Council</p> <p>If someone can get back to me in regards to the new guardrails being installed, that would be fantastic!</p>	<p>The scope, design, schedule, and phases of specific projects are not addressed in the LRTP. These elements will be addressed during the environmental planning phase of the project development and there will be additional opportunities to contribute feedback at that time. We will pass along this comment to the project team and we encourage you to provide additional project-specific feedback at: <a href="http://www.metro.net/projects">www.metro.net/projects</a>.</p>
Wess	332	<p>I second Mrs. Taylor's concern about safety on State Route 138. Making a left turn with a high-speed semi-trailers bearing down on you from both directions is a terrifying experience. A few left turn-lanes could make a world of difference!</p>	<p>The scope, design, schedule, and phases of specific projects are not addressed in the LRTP. These elements will be addressed during the environmental planning phase of the project development and there will be additional opportunities to contribute feedback at that time. We will pass along this comment to the project team and we encourage you to provide additional project-specific feedback at: <a href="http://www.metro.net/projects">www.metro.net/projects</a>.</p>

## Attachment C – LRTP Public Comment Response Matrix

### Public Comments

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Jaime	334	How are you guys expect people to take the metro when is very dangerous.. I have complained several times and nothing has occurred. Last week when I complained about a person not wearing a mask (which is the law) i was told by a metro police that "is not my job" and got upset. You use TV and all kinds of media to push this plan but the true is that for years the metro is a wild place with drugs deals violence and now COVID-19 runs wild.	Safety of our riders is our number one priority. Metro is committed to maintaining a safe and secure transit system, while balancing our the community concerns surrounding policing, homelessness, and customer experience. Thank you for your feedback and we will share this comment with the appropriate department within Metro.
Barbara	337	The challenge of providing better transit to our metropolitan area must be met in order to maintain a livable city. However, the transit must be a utility that serves the needs of the region's residents and is accessible, reliable and well-maintained. The LRP addresses these issues with the proposed planned projects and additional action plans and policies. However, before looking to the future plan, it is important to fully understand some of the current unmet needs of riders on the system. While a Homeless Action Plan is being implemented and will continue to be implemented, it is currently not working and the presence of homeless/unhoused individuals is undermining riders' trust in the safety and cleanliness of the system. "How women travel" is noted in the LRP summary, but at this moment, it may be more relevant to ask IF women travel on Metro. We are aware of many riders who were excited to ride the EXPO Line and who no longer use it because they do not wish to return after work or after dark alone.	In spring 2016, at the direction of our CEO, Metro created a Homeless Task Force to address homelessness in and around the transit system and align action with County and City of Los Angeles priorities. In February 2017, the Homeless Action Plan was finalized. The Action Plan's goals are threefold: 1. to enhance the customer experience; 2. maintain a safe and secure system; and, 3. connect homeless persons in the transit system to services and resources under Measures H and HHH. Metro continues to expand efforts in this area.
			Safety of our riders is our number one priority. Metro is committed to maintaining a safe and secure transit system, while balancing our the community concerns surrounding policing, homelessness, and customer experience. Thank you for your feedback and we will share this comment with the appropriate department within Metro.
Jorge	367	<p>Hello. I'd like to share some ideas.</p> <p>1. Bus stops at the middle of the block approximately, away from drive ways. This change will avoid the risk of an accident when drivers cut in front of a bus to turn right just when the bus is leaving the bus stop and the bus operator is forced to make a sudden stop and probably causing passengers to fall down.</p> <p>2. The bus route number sign; regular buses to show it on the left side of sign, rapid buses on the right side. Examples, 204 {---, ---}704, this new way of signing may aid passengers not to miss their bus at times when the day is dark, cloudy or rainy and visibility is low.</p> <p>Hope you find these ideas useful. I stil have a few more, let me know if you'd like me to share them with you.</p> <p>Have a great day.</p>	<p>Metro is committed to building a World Class Bus system. Improvements planned for the system include those to enhance the customer experience, improve the system operations, and to provide reliable access to riders where and when they need to travel. We recognize that the transit system has lost ridership over the last several years and are committed to improving our bus service. Through our NextGen Bus Plan, Metro is redesigning our entire bus network and these changes will be implemented over the next 18 months. Working with local partners, Metro is exploring projects to improve bus speed and reliability in congested corridors.</p> <p>Additional efforts to improve customer experience, including safety and security, are underway as well.</p>

## ATTACHMENT D

REVISED

## SUMMARY OF DRAFT LRTP REVISIONS

NOTE: The Draft 2020 LRTP was distributed for review and comment on May 29, 2020. Comments were requested by July 13, 2020. The following reflects all revisions proposed for the Final LRTP.

Page(s)	Revisions to Plan
1-7	Add cover graphic and introductory text
8	Add letter from CEO
10	Add discussion on the potential impact of COVID-19 on the LRTP
15	Clarify that LA County is the most populous county in the US, not the largest
15	Clarify that Metro's service area fits the combined land areas of the ten cities identified
16	Clarify that LA County is home to many of the nation's most congested highway corridors
17	Clarify that historically, transportation policies and investments in LA County have prioritized single-occupant vehicle (SOV) travel over more affordable, high-quality mobility alternatives
17	Clarify that economic prosperity and health are also affected by racial and socioeconomic lines
18, 19	Revise maps to more clearly distinguish between existing transit lines and projects under construction
18	Clarify that Metro plans, builds, manages, and maintains LA County's transportation system
19	Clarify that Metro's Microtransit program is known as Metro Micro
19	Clarify that adding more general-purpose freeway lanes is often an expensive and disruptive option that will not solve congestion as the county continues to grow
20-25	Revise section header to LRTP Elements, Benefits & Priorities to be consistent with the text
20	Move and clarify discussion of community engagement efforts
20	Clarify that the financial commitments of the 2020 LRTP include Measures M and R
20	<u>Clarify the bottoms-up approach of Measure M</u>
21	Clarify that the Measure M Funded Transit & Highway Improvements include Measure R commitments
23	<u>Clarify that scenario tests will require Board action prior to implementation</u>
24	Add conceptual illustration of Plan elements
25	Revise role of LRTP relative to other plans
28	Add discussion on security and homelessness
29	Add C Line (Green) Extension to Torrance to the list of near-term projects
29	Remove Vermont Transit Corridor from near-term BRT list
30	Add modes to project names
30	Add Antelope Valley Line Capacity and Infrastructure Improvements Program to table
30	Clarify C Line (Green) Eastern Extension project name
30	Remove reference to mode for Vermont Transit Corridor
30	Clarify footnotes to table
31	<u>Add label to Gold Line Foothill Extension to Claremont</u>
31	Clarify that Purple Line Section 3 is under construction.
31	Clarify that 2050 is the horizon year of the LRTP.
31	Clarify the regional commuter rail improvements are the Antelope Valley Line Capacity and Infrastructure Improvement Program
31	Clarify alignment for Crenshaw North has not been determined
32	Identify four pillar rail projects in action 1.1c
32	Clarify Metro's role in actions 1.2b and 1.2j
32	Clarify timeframe of action 1.1f
32	Clarify NextGen's goal of reversing the declining ridership trend in Strategy 1.2
34	Clarify Systemwide Station Design implementation in action 1.4a



34	Clarify discussion of real-time arrival information in action 1.4b
34	Clarify discussion of station safety and security in action 1.4f
34	Clarify Metro Micro implementation in action 1.5b
34	Clarify timeframe of action 1.5b
34	Clarify Metro's role in actions 1.5b
34	Clarify discussion of new forms of mobility in Strategy 1.5
35	Clarify discussion of customer experience in Strategy 1.6
35	Add discussion on station accessibility to action 1.6b
36	Clarify Multi-Agency Policing Plan in action 1.7b
36	Clarify Metro's role in actions 1.7f and 1.8c
36	Add discussion on Transit Homeless Action Plan
37	Clarify timeframe of action 1.8c
42	Clarify discussion on Metro ExpressLanes
42	Clarify role of Caltrans
42	Add reference to integrated corridor management
42	Clarify amount of funding for major highway investments
44	Clarify name of Sepulveda Pass Transit Corridor (Ph 1 - ExpressLanes) project on table
44	Add Rosecrans/Marquardt Grade Separation to table
44	Add SR-138 Capacity Enhancements to table
44	Add I-10 East Expresslanes to table
44	Add I-605 Corridor "Hot Spot" Interchange Improvements to table
44	Clarify opening years of projects in table
45	Add Rosecrans/Marquardt Grade Separation to map
45	Add SR-138 Capacity Enhancements to map
45	Clarify name of Sepulveda Pass Transit Corridor (Ph 1 - ExpressLanes) project on map
45	Clarify I-5 North Project to Parker Rd on map
45	Add I-605 Corridor "Hot Spot" Interchange Improvements to map
46	Add Metro's role in action 2.1b
46	Add signal synchronization to action 2.1c
46	Add Metro's role in action 2.3e
46	Add goods movement to Strategy 2.1
47	Update discussion of ExpressLanes Expansion
48	Revise Metro's role in action 2.6b
48	Add Metro's role in action 2.6c
48	Add Metro's role in action 2.6d
48	Add equity and environmental sustainability to Strategy 2.5
48	Add telecommuting to Action 2.6e
49	Add references to intermodal facilities to Goods Movement Strategic Plan
50	Add partners to Action 2.7a
50	Add safety and broader description of Metro's role to Strategy 2.7
52	Clarify delay and VMT metrics
53	Add photo
56	Add discussion on role of local partners
56	Corrected spelling of Fairview Heights
57	Clarify that final alignments will be identified during environmental processes
58	Clarify Complete Streets Policy in Strategy 3.1
58	Clarify FLM program in action 3.2a
58	Clarify timeframe of action 3.2b
58	Add reference to intermodal facilities in action 3.2b
58	Clarify timeframe of action 3.3b
58	Clarify active transportation infrastructure in Strategy 3.3

59	Revise length of LA River Bike Path
60	Add action 3.6d promoting a decrease in GHG emissions or reduction of single-occupant vehicle (SOV) trips
61	Add I-710 Clean Trucks Program to Zero-Emission Trucks Collaborative
62	Capitalize "Complete Streets"
67	Add freeway labels to map
67	Clarify map title
68, 70	Relocate Strategies 4.1, 4.2, and 4.3 to align with TOC text
68	Add action 4.1g on Transit to Parks Strategic Plan
69	Remove reference to draft in definition of equity
70	Add discussion on Metro's Joint Development program
70	Add action 4.3f on Comprehensive Pricing Study
72	Revise Metro's role in action 4.6b
72	Revise Metro's role in action 4.6c
73	Clarify discussion of E3 Training Programs
76	Revise Figure 26 to be FY2021-FY2050
76	Change reference to Figure 26
77	Clarify Other Local Sources of funding
77, 79, 81	Add reference to YOE for pie charts
80	Clarify FSP services
82	Delete redundant sentence
82	Add discussion on Trip Reduction Strategies
84	Add to discussion on SRTP
<u>84</u>	<u>Clarify that the region's new travel patterns will be analyzed in SRTP</u>
Back cover	Update title of Board Member Fasana
<u>Back cover</u>	<u>Update the First and Second Vice Chairs</u>
Various	Revise maps to include SR-138 connection and additional roadway symbology in North County



# 2020 Long Range Transportation Plan for Adoption

Planning & Programming Committee 9.16.20

Executive Management Committee 9.17.20

# 2020 LRTP Adoption

## **LRTP meets conformity/funding requirements:**

- > Financially constrained, technical analysis for SCAG RTP/SCS
- > Major project inclusion required for state & federal funding eligibility

## **Time to adopt:**

- > LRTP remained in alignment with SCAG's schedule
  - SCAG Adopted 2020 RTP/SCS May 7<sup>th</sup> (transportation projects)
  - SCAG Adopted 2020 RTP/SCS Sept 3<sup>rd</sup> (land use and housing)

## **As-needed amendments:**

- > SCAG RTP/SCS & LRTP: both living documents
  - Update/amend to address project & plan changes

# L RTP is guided by Vision 2028.

## We're guided by our *Strategic Plan* goals.

 *Vision 2028 Strategic Plan*

### We're creating

#### 1 *Faster Travel Options* 2 *Better Trips* 3 *Thriving Communities*

##### *Better Transit*

Providing more transit options with improved quality and service

*Transit Projects*

*Bus Improvements*

*New Mobility Options*

##### *Less Congestion*

Managing the transportation system to reduce the amount of time people spend in traffic

*Roadway Improvements*

*Congestion Management*

*Goods Movement*

##### *Complete Streets*

Making streets and sidewalks safe and convenient for everyone, to support healthy neighborhoods

*Bike and Pedestrian Projects*

*Local Street Improvements*

*Station and Stop Access Enhancements*

##### *Access to Opportunity*

Investing in communities to expand access to jobs, housing and mobility options

*Workforce Initiatives*

*Support for Local Businesses*

*Transit Oriented Communities*

 *Long Range Transportation Plan*

### We're committed to

#### 4 *Leadership* 5 *Accountability*

 Collaboration  Continuous Improvement

 Customer Focus  Innovation  Inspired and Inclusive Workforce  Safety

 *Customer Experience Plan*  *COVID-19 Recovery Plan*

We're intentionally focused on *eliminating racial and socioeconomic disparities and advancing sustainable practices in everything we do.*

 Equity  Sustainability

 *Equity Plan*  *Moving Beyond Sustainability Plan*

# Public Engagement

- > Telephone town hall called 100,000
- > Posters on all bus and rail lines
- > More than 23,000 postcards sent\*
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- > Almost 2.5 million direct emails\*
- > More than 130,000 LRTP website visits

\*Targeted residents in Equity Focus Communities





# Public Comment Summary

## > Strong support for:

- Expanded and improved transit
- Active transportation and complete streets

## > Some support for roadway enhancements

## > Many comments on:

- Safety/security recommendations and homelessness concerns
- Project-specific comments and requests

(e.g., projects completed sooner, alignment comments, etc.)

## > Some comments on:

- Equity considerations
- Implications and unknowns surrounding COVID-19
- Modal prioritization and regional prioritization of funding
- Fare policy and congestion pricing



# 2020 LRTP Technical Document and Next Steps

## Technical document provides the following detail and data:

- > Public engagement metrics
- > Project and program descriptions
- > Performance Measures
- > Subregional demographics and travel patterns
- > Travel demand model analysis and assumptions
- > Financial forecast fund types and assumptions



## Next steps:

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  - Implications and unknowns surrounding COVID-19
  - Modal prioritization and regional prioritization of funding
  - Fare policy and congestion pricing



# Recent Draft Changes to 2020 Draft LRTP

The following language was added, as noted below—

> p. 20 Added the following language to the first paragraph: “These commitments were previously established in collaboration with our local partners. Metro intentionally employed an extensive bottoms-up approach with subregional partners, to ensure that Measure M was shaped by their local project priorities to achieve subregional balance.”

> p. 23 Added the following language in the left column under bullet #3: “These scenario tests represent policy opportunities, but do not reflect specific policy directives. Board action will be required for any policy action or implementation.”

> p. 84 Replaced 2nd sentence (after “...2020 LRTP.”) in 3rd paragraph with: “The SRTP will acknowledge and analyze the region's new travel patterns and address regional economic recovery and resilience, while continuing to improve regional mobility, air quality, social justice and the advancement of equity.”

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