



San Gabriel Valley Council of Governments

AGENDA AND NOTICE OF THE MEETING OF THE SGVCOG PUBLIC WORKS TECHNICAL ADVISORY COMMITTEE

**Monrovia Community Center: 119 W. Palm Ave.; Monrovia, CA 91016
Monday, April 15, 2019 – 12:00 PM**

2018/2019 OFFICERS

Chair: Rene Guerrero

Vice Chair: David Liu

Immediate Past Chair:
Phil Doudar

Voting Members:

Arcadia

Azusa

Claremont

Diamond Bar

El Monte

Glendora

Irwindale

Industry

La Verne

Monrovia

Pomona

San Dimas

San Gabriel

San Marino

South El Monte

South Pasadena

Temple City

West Covina

LA County DPW

Thank you for participating in today's meeting. The Public Works Technical Advisory Committee encourages public participation and invites you to comment on agenda items.

MEETINGS: *Regular Meetings of the Public Works Technical Advisory Committee are held on the third Monday of each month at 12 PM at the Monrovia Community Center – 119 W. Palm Ave., Monrovia, CA 91016.* The Public Works Technical Advisory Committee agenda packet is available at the San Gabriel Valley Council of Government's (SGVCOG) Office, 1000 South Fremont Avenue, Suite 10210, Alhambra, CA, and on the website, www.sgvkog.org. Copies are available via email upon request (sgv@sgvcog.org). Documents distributed to a majority of the Committee after the posting will be available for review in the SGVCOG office and on the SGVCOG website. Your attendance at this public meeting may result in the recording of your voice.

CITIZEN PARTICIPATION: Your participation is welcomed and invited at all Public Works Technical Advisory Committee meetings. Time is reserved at each meeting for those who wish to address the Board. SGVCOG requests that persons addressing the Committee refrain from making personal, slanderous, profane, or disruptive remarks.

TO ADDRESS THE PUBLIC WORKS TECHNICAL ADVISORY COMMITTEE:

At a regular meeting, the public may comment on any matter within the jurisdiction of the Committee during the public comment period and may also comment on any agenda item at the time it is discussed. At a special meeting, the public may only comment on items that are on the agenda. Members of the public wishing to speak are asked to complete a comment card or simply rise to be recognized when the Chair asks for public comments to speak. We ask that members of the public state their name for the record and keep their remarks brief. If several persons wish to address the Committee on a single item, the Chair may impose a time limit on individual remarks at the beginning of discussion. **The Public Works Technical Advisory Committee may not discuss or vote on items not on the agenda.**

AGENDA ITEMS: The Agenda contains the regular order of business of the Public Works Technical Advisory Committee. Items on the Agenda have generally been reviewed and investigated by the staff in advance of the meeting so that the Committee can be fully informed about a matter before making its decision.

CONSENT CALENDAR: Items listed on the Consent Calendar are considered to be routine and will be acted upon by one motion. There will be no separate discussion on these items unless a Committee member or citizen so requests. In this event, the item will be removed from the Consent Calendar and considered after the Consent Calendar. If you would like an item on the Consent Calendar discussed, simply tell Staff or a member of the Public Works Technical Advisory Committee.



In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the SGVCOG office at (626) 457-1800. Notification 48 hours prior to the meeting will enable the SGVCOG to make reasonable arrangement to ensure accessibility to this meeting.



PRELIMINARY BUSINESS

1. Call to Order
2. Pledge of Allegiance
3. Roll Call
4. Public Comment (*If necessary, the Chair may place reasonable time limits on all public comments*)

CONSENT CALENDAR (*It is anticipated that the Committee may take action on the following matters*)

5. Review Public Works TAC Meeting Minutes: 3/18/2019 -- Page 1
Recommended Action: Review and approve.

PRESENTATIONS

6. Regional Public Works Lookahead: Presentation by Phil Doudar, Deputy Director, LA County Department of Public Works -- Page 5
Recommended Action: For information only.
7. San Gabriel Trench Grade Separation Project Overview: Presentation by Phillip Balmeo, Senior Project Manager, San Gabriel Valley Council of Governments & Alameda Corridor-East Project
Recommended Action: For information only. -- Page 15

ACTION ITEMS (*It is anticipated that the Committee may take action on the following matters*)

INFORMATION ITEMS

UPDATE ITEMS

8. Metro “Measure Up! Arterial Performance Measurement” Pilot Program Extension: Presentation by Celine Chen, Transportation Associate, LA Metro -- Page 33
Recommended Action: For information only.
9. Metro Active Transportation (MAT) 2% Program – Update -- Page 47
Recommended Action: For information only.

EXECUTIVE DIRECTOR’S COMMENTS

ANNOUNCEMENTS

- The next Public Works TAC Meeting will be a joint meeting with the SGVCOG’s Energy, Environment, and Natural Resources (EENR) Committee on **Wednesday, May 15, 2019**. The purpose of this joint committee meeting is to accommodate time for members of both SGVCOG committees to hear about, and provide substantive feedback for, the CPUC’s new Decarbonization Rulemaking Proceedings. The CPUC will be represented by its president, Michael J. Picker.

ADJOURN



SGVCOG Public Works TAC Meeting Minutes

Date: March 18, 2019
 Time: 12:00 P.M.
 Location: Monrovia Community Center
 119 West Palm Avenue, Monrovia, CA 91016

PRELIMINARY BUSINESS

1. Call to Order. The meeting was called to order at 12:15 p.m.
2. Pledge of Allegiance. R. Guerrero led the Public Works TAC in the Pledge of Allegiance.
3. Roll Call

Public Works TAC Members Present

P. Wray; Arcadia
 R. Delgadillo; Azusa
 D. Liu; Diamond Bar
 C. Ortiz; El Monte
 R. Ramos; Irwindale
 D. Keesey, A. Ciotti; La Verne
 A. Tachiki; Monrovia
 R. Guerrero, J. Carver; Pomona
 K. Patel, S. Garwick; San Dimas
 R. Salas, M. Heredia; South El Monte
 A. Avery; Temple City
 A. Ross, M. Skolnik, J. Lu; LACDPW

Public Works TAC Members Absent

Claremont
 Glendora
 Industry
 Monterey Park
 San Gabriel
 San Marino
 South Pasadena
 West Covina

Guests

S. Ariannia, V. Sedagat; Geo-Advantec
 G. Jaquez, M. Killen; MNS Engineers
 A. Ansari; Transtech Engineers
 S. Ahmad; SA Associates
 J. Martinez; NCE
 D. Johnson; Project Partners
 D. Cadena; WKE, Inc.
 R. Romero; Assembly Member Ed Chao’s Office

SGVCOG Staff

P. Duyshart

4. Public Comment.

There was no public comment.

CONSENT CALENDAR

5. Review Public Works TAC Meeting Minutes: 02/25/2019

There was a motion to approve the Consent Calendar. (M/S: R. Salas/D. Keesey).

[Motion Passed]

Ayes	Arcadia, Azusa, Diamond Bar, El Monte, Irwindale, La Verne, Monrovia, Pomona, San Dimas, South El Monte, Temple City, LA County DPW
Noes	
Abstain	

Absent	Claremont, Glendora, Industry, Monterey Park, San Gabriel, San Marino, South Pasadena, West Covina
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PRESENTATIONS

6. AB 802 and Facility Energy Benchmarking Workshop: co-hosted by the San Gabriel Valley Energy Wise Partnership (SGVEWP) and the SoCalREN

P. Duyshart of the SGVCOG kicked off this workshop by providing members of the Public Works TAC with an overview of the SGVEWP, which was one of the hosts of the Energy Benchmarking Workshop. He explained how the SGVEWP is a partnership between the SGVCOG, SCE, and SoCalGas that provides financial incentives for cities' direct energy savings through the installation of energy efficiency measures. He also mentioned how the SGVEWP works with SGV cities to identify opportunities for municipal building energy efficiency retrofits and assists cities in implementing these projects while accessing technical assistance. Duyshart then went over how Partnership activities include:

- SCE's Energy Leader Model
- Energy Action Plan Updates
- City Staff Energy Work Group
- Toolbox Trainings
- One-on-One City Meetings
- EASY Assessment
- Education and outreach efforts at community events

Next, N. Espinoza and P. White of The Energy Coalition and the SoCalREN gave the main presentation of the Energy Benchmarking Workshop. P. White provided TAC attendees with an overview of what the Southern California Regional Energy Network (SoCalREN) is: it is a ratepayer-funded utility energy efficiency program that is authorized by the CPUC, and is administered by the County of Los Angeles. Among other services, SoCalREN provides free utility coordination services for public sector entities, including local governments, specifically pertaining to energy efficiency. SoCalREN offers enrolled local governments the following services:

- Project management support
- Energy use analysis
- Energy audits
- Financial services
- Project performance specifications
- Construction management support
- Expedited construction
- Objective third party reviews

N. Espinoza then led and conducted the benchmarking portion of the presentation. She talked about how benchmarking allows cities and property owners to compare the energy use of their facilities to other similar facilities, which then allows building operators to identify potential opportunities to implement projects and improve energy efficiency of a facility. She described how local governments needs to be aware of the California Energy Benchmarking Program, which was enacted into law by AB 802 in 2015, and requires commercial property owners to benchmark facilities above 50,000 sq. ft. and report the results to the State of California by June 1 of every year. Espinoza then walked through the detailed, multi-faceted, step-by-step process on how to conduct energy benchmarking of facilities, including how to properly use the most common benchmarking tool, ENERGY STAR Portfolio Manager. She also provided pertinent information

on how to properly submit benchmarking reports to the CEC in order to comply with AB 802. Ms. Espinoza also gave an overview of various useful benchmarking resources.

ANNOUNCEMENTS

R. Guerrero announced that the next Public Works TAC meeting will take place on Monday, April 15th, 2019.

ADJOURN

The meeting adjourned at 1:03 p.m.

DATE: April 15, 2019
TO: SGVCOG Public Works TAC
FROM: Marisa Creter, Executive Director
RE: **LA County Public Works Regional Lookahead**

RECOMMENDED ACTION

For information only.

BACKGROUND

The Los Angeles County Department of Public Works' (LACDPW) main overarching mission is to deliver regional infrastructure and services which improve the quality of life for all residents in Los Angeles County. With a yearly budget of about \$2.4 billion, LACDPW works on the design, construction, operation, and maintenance of roads, traffic signals, bridges, airports, sewers, flood control, water supply, water quality, and water conservation facilities. LACDPW is responsible for projects that are related to:

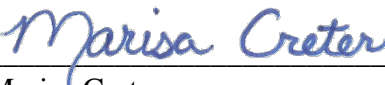
- Transportation
- Water Resources
- Environmental Services
- Public Buildings, Development Services
- Emergency Management

As societal demands, the climate, demographic and population shifts, and technologies, change, evolve, and emerge, and as new trends arise, LACDPW, like so many other agencies and entities, must adapt their operations and programs to these changes. LACDPW Deputy Director Phil Doudar will give a presentation in which he shares the County's plans for operations and projects in the following service areas:

- Transportation
- Water Resources
- Solid Waste
- Plastic Waste
- Homelessness
- Climate Change

The purpose of this presentation is to provide Public Works TAC members with an overview and lookahead at what the priorities of LA County Public Works are moving forward.

Prepared by: 
Peter Duyshart
Project Assistant

Approved by: 
Marisa Creter
Executive Director

ATTACHMENTS

Attachment A: Presentation Slides -- Page 7



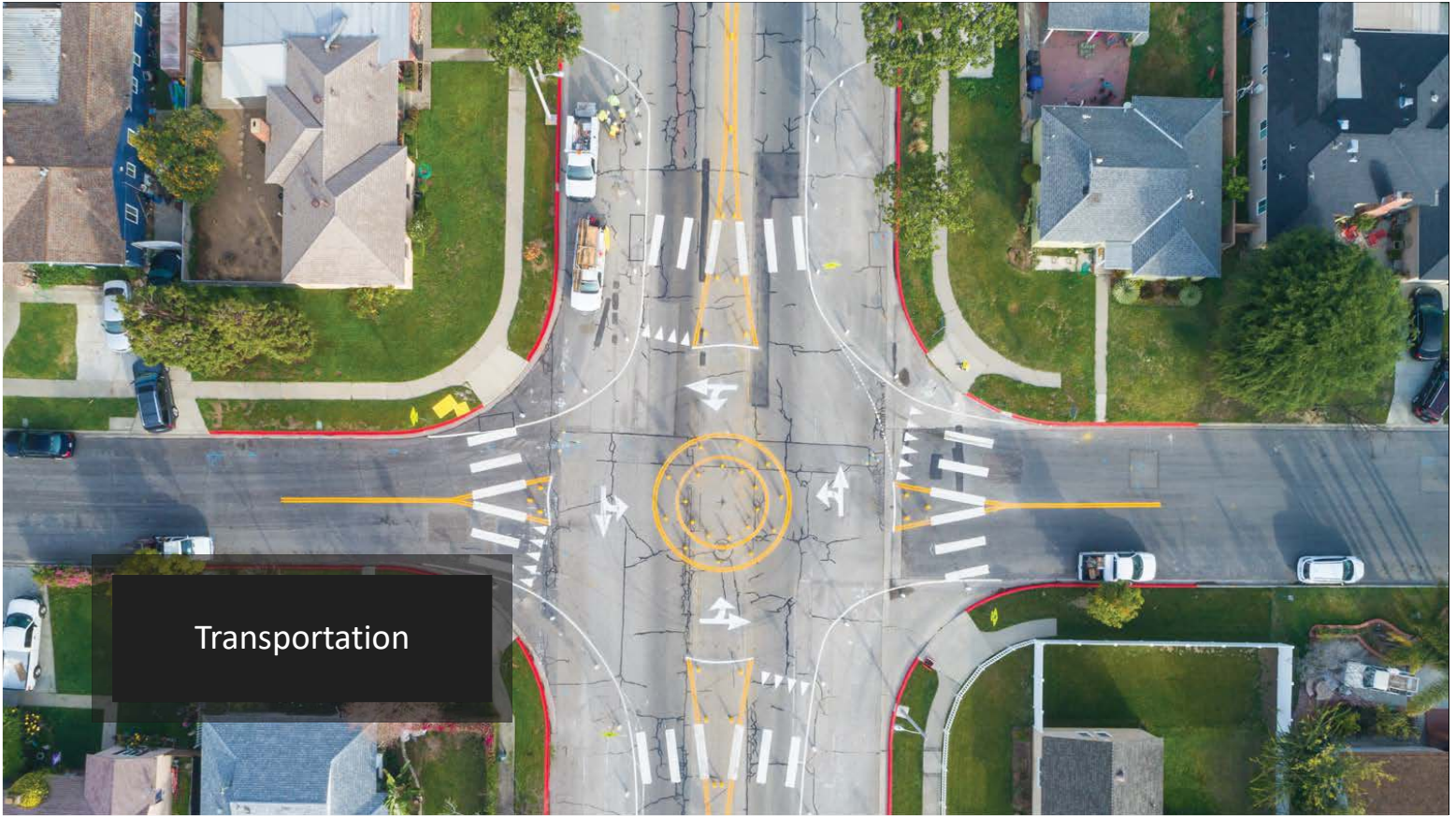
San Gabriel Valley Council of Governments
Technical Advisory Committee

April 15, 2019

The Business of Public Service

- Public Works: The County's builder
- Municipal public works services across six core service areas
- 4,000 square mile service area
- \$2.4 Billion Budget

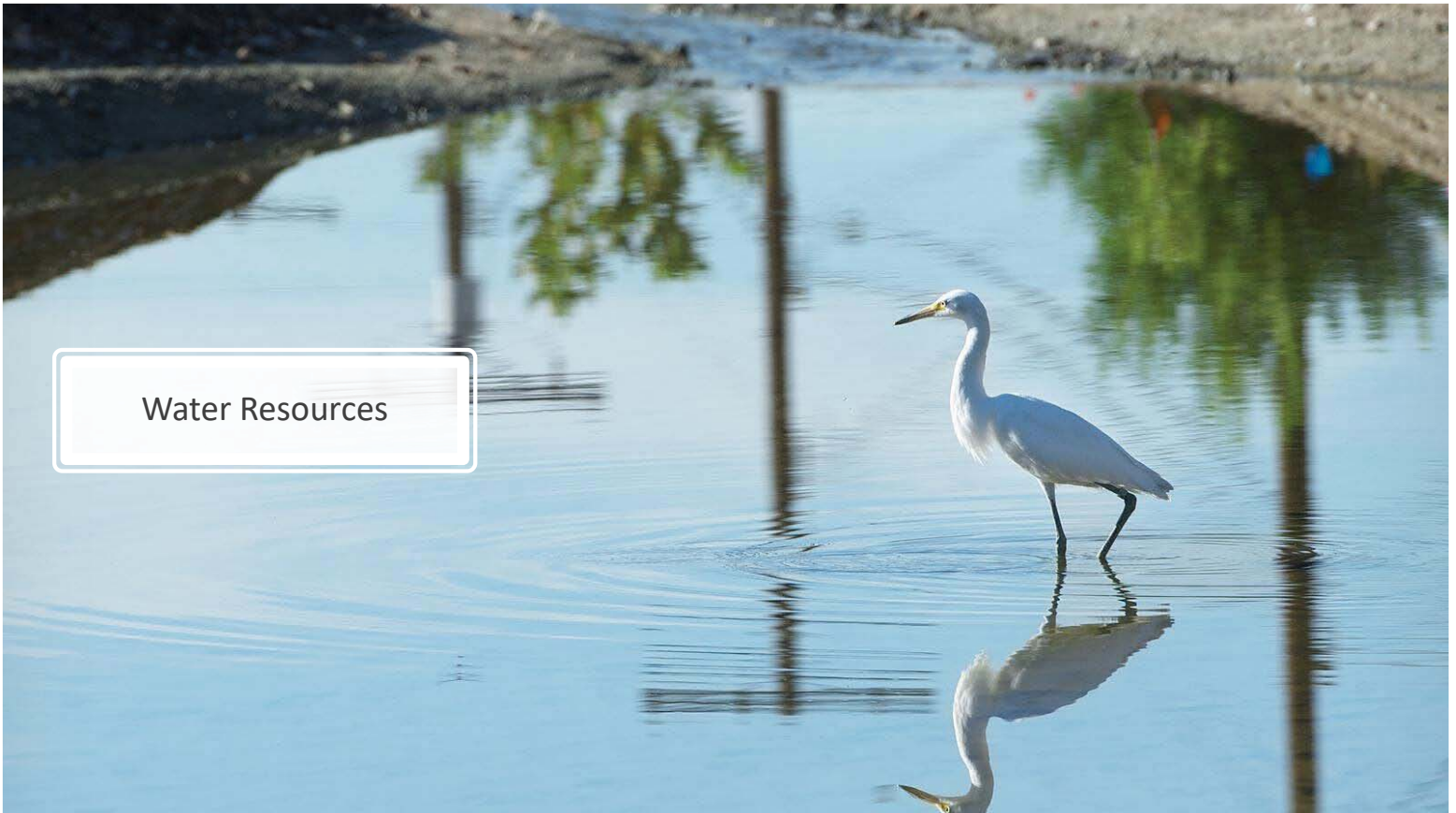




Water Resources



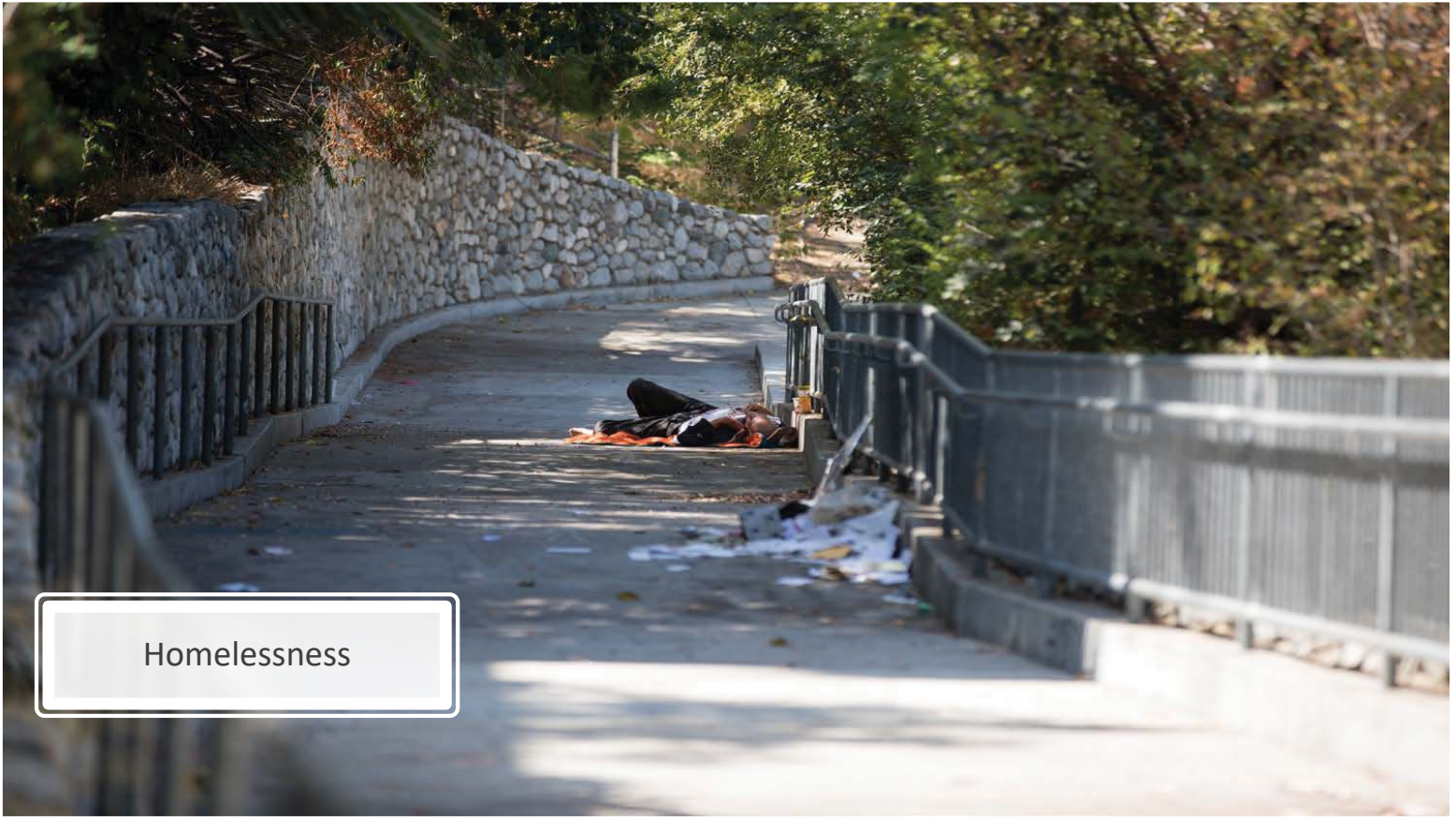
Water Resources



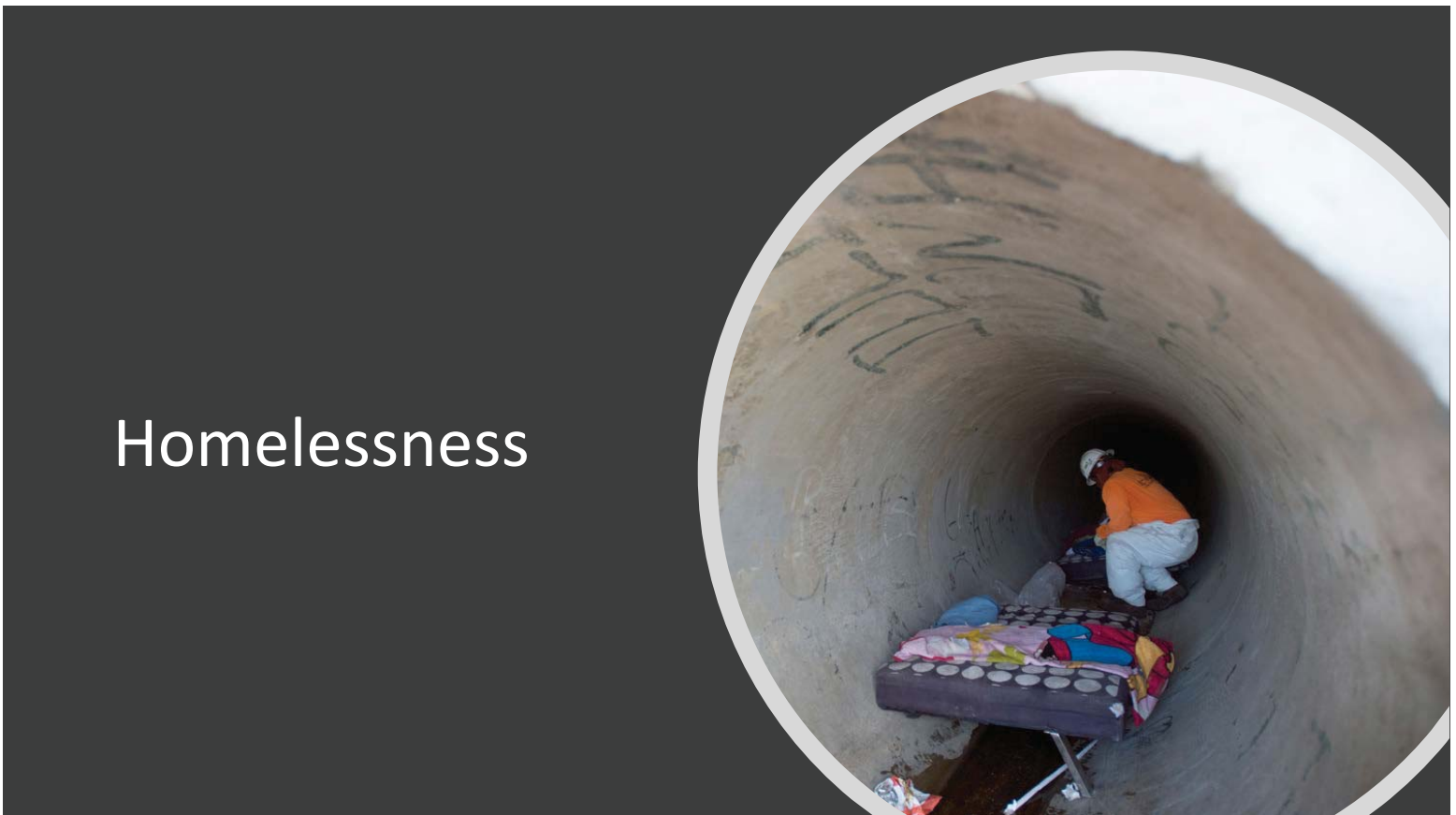


Solid Waste





Homelessness



Homelessness



Questions



Phil Doudar, Deputy Director

pdoudar@pw.lacounty.gov

pw.lacounty.gov

DATE: April 15, 2019
TO: SGVCOG Public Works TAC
FROM: Marisa Creter, Executive Director
RE: **San Gabriel Trench Grade Separation Project Overview**

RECOMMENDED ACTION

For information only.

BACKGROUND

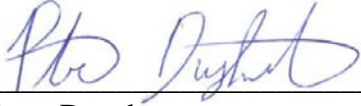
The Alameda Corridor-East (ACE) Project was established in 1998 by the San Gabriel Valley Council of Governments (SGVCOG). The primary purpose of the ACE Project is to complete significant and consequential grade-separation projects which mitigate vehicle delays and collisions at roadway crossing with railroad tracks. These collisions and delays occur due to a significant increase in freight rail traffic in the San Gabriel Valley, particularly through the ACE corridor. The ACE Corridor in the southern portion of the San Gabriel Valley sees rail traffic which carries 16 percent of all ocean bound freight containers in the United States. Freight traffic from the twin Ports of Los Angeles and Long Beach is projected to increase by 150 percent by 2042. Due to this significant projected volume of freight traffic, completing grade separation projects along the ACE corridor is imperative for public health, public safety, and for regional and national economic activity. To date, the ACE Project of the SGVCOG has completed 14 grade separation projects, and there are also currently three projects under construction and two grade separation projects in the design phase.

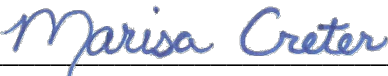
One of the 14 completed grade separation projects is the San Gabriel Trench Grade Separation Project. This project took place on the Union Pacific Railroad Alhambra Branch in the City of San Gabriel, from just east of Chapel Avenue to just east of Walnut Grove Avenue. Activities related to this project began in 2012; these pre-construction activities included a very thorough archaeological excavation across the street from the San Gabriel Mission, which is just north of this rail corridor. Construction activities on this 2.2-mile grade separation project then began in Spring 2014; construction activities included the lowering of a 1.4-mile section of the Union Pacific railroad track in a 30-foot-deep, 65-footwide east-west trench. Other significant infrastructure that was part of this project included new roadway bridges at Ramona Street, Mission Road, Del Mar Avenue, and San Gabriel Boulevard, as well as shoofly construction and an at-grade crossing modification at Walnut Grove Avenue. The ACE Project and its construction and engineering partners also had to modify 2 drainage channels, relocate and install substantial utilities, and complete roadway maintenance.

The project resulted in a plethora of positive impacts upon completion in September 2018. The grade separation reduces traffic by 1,744 vehicle-hours of delay for almost 90,000 motorists per day. The project also addresses safety, as, over a 10-year period, ten collisions have been recorded at the four crossings of this railroad segment, two of which resulted in fatalities. Moreover, this trench enables emergency responders and vehicles to respond more quickly to calls on either side of the tracks, as large freight trains will no longer block these key north-south roads.

This project was an immense undertaking, as it employed 1,211 workers, including 133 San Gabriel Valley residents. It was also unique to the ACE Project in that it involved digging and installing a 30-foot-deep trench for a 1.4-mile stretch. This project was so innovative, successful, and impactful that, in March 2019, it was announced as the California Transportation Foundation's Project of the Year for the CTF's 30th Annual Transportation Awards! This award will be presented to the SGVCOG's Capital Projects staff in May 2019.

SGVCOG Senior Project Manager Phil Balmeo, who was the lead project manager for this outstanding grade separation project, will give a presentation to the Public Works TAC during which he will describe the technical construction process to the members of the TAC. He will go into great detail about how the 1.4-mile trench was dug out and constructed.

Prepared by: 
Peter Duyshart
Project Assistant

Approved by: 
Marisa Creter
Executive Director

ATTACHMENTS

Attachment A: San Gabriel Trench Project Overview Presentation Slides -- Page 17

San Gabriel Trench



SGVCOG PW – TAC
April 15, 2019



CARGO FROM LA/LB PORTS THROUGH SAN GABRIEL VALLEY. DISTINGUISHING ACTA AND ACE



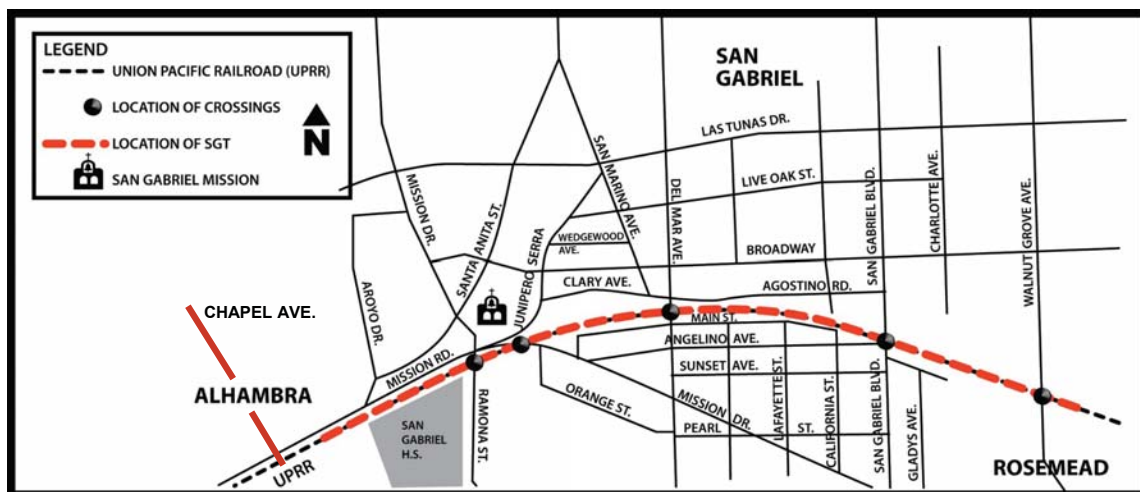


SAN GABRIEL TRENCH TEAM

- **Railroad: Union Pacific Railroad (UPRR)**
- **Designer: Moffatt and Nichol Engineers**
- **ROW Agent: Paragon Partners**
- **Construction Manager: Jacobs Engineering**
- **Archeological Team: SWCA**
- **Contractor: Walsh Construction**



PROJECT LIMITS/KEY FACTS





CONSTRUCTION OVERVIEW

- **2.2 mile project**
 - **4 agencies affected**
- **1.4 miles of trench**
- **Project Costs - \$312M**
- **4 roadway bridges**
- **1 at-grade crossing modification**
- **2 rail road bridges**
- **Shoofly construction**
- **Modification of 2 drainage channels**
- **Installation of substantial utilities**
 - **Major Fiber Optic Infrastructure**
 - **Storm Drain**
 - **Sewer**
 - **Various Dry Utility Casings**
- **Coordination of franchise utilities**
- **Roadway maintenance and repairs**



SAN GABRIEL TRENCH – WHY A TRENCH?

- **National Historic Preservation Act (NHPA) 1966**
- **Because of the San Gabriel Mission**



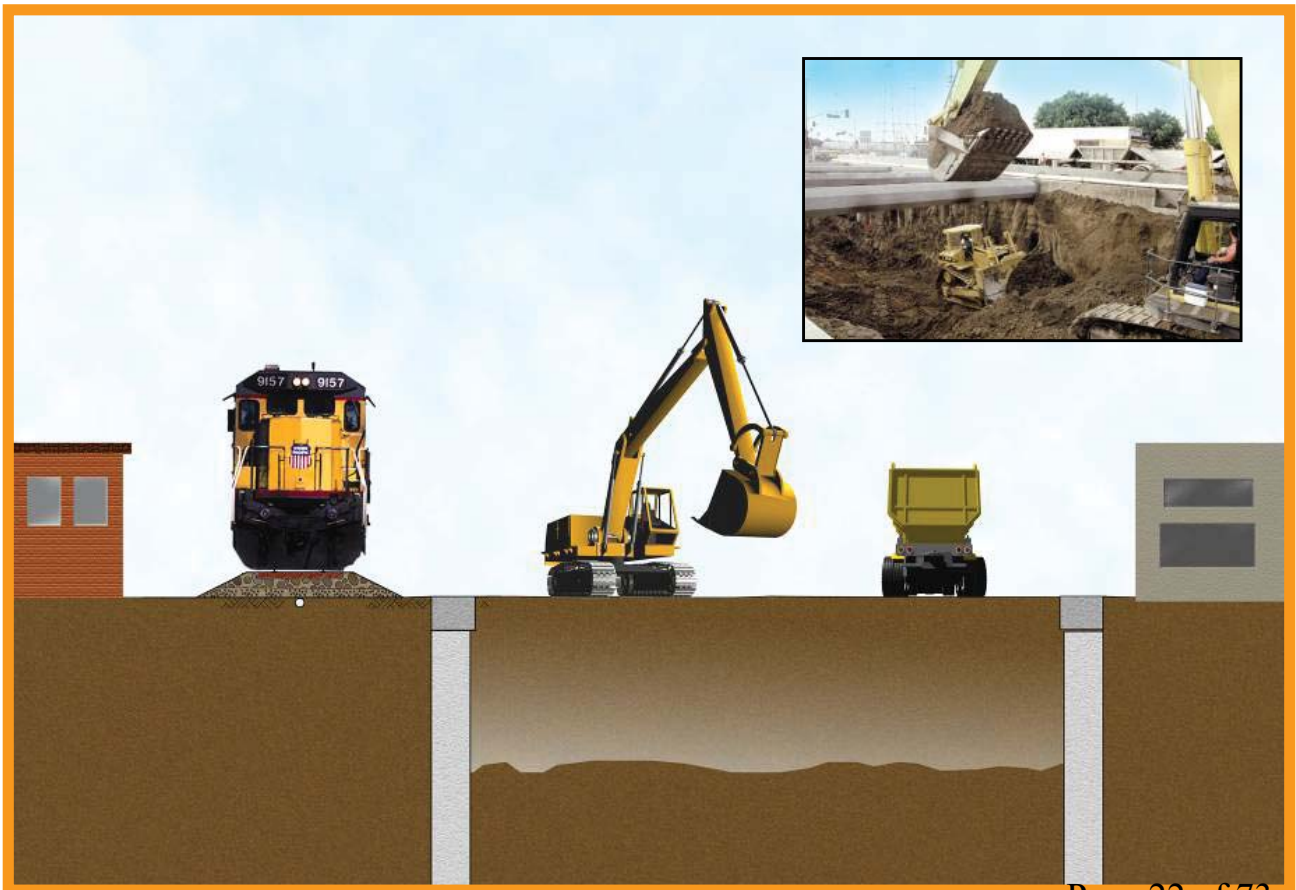
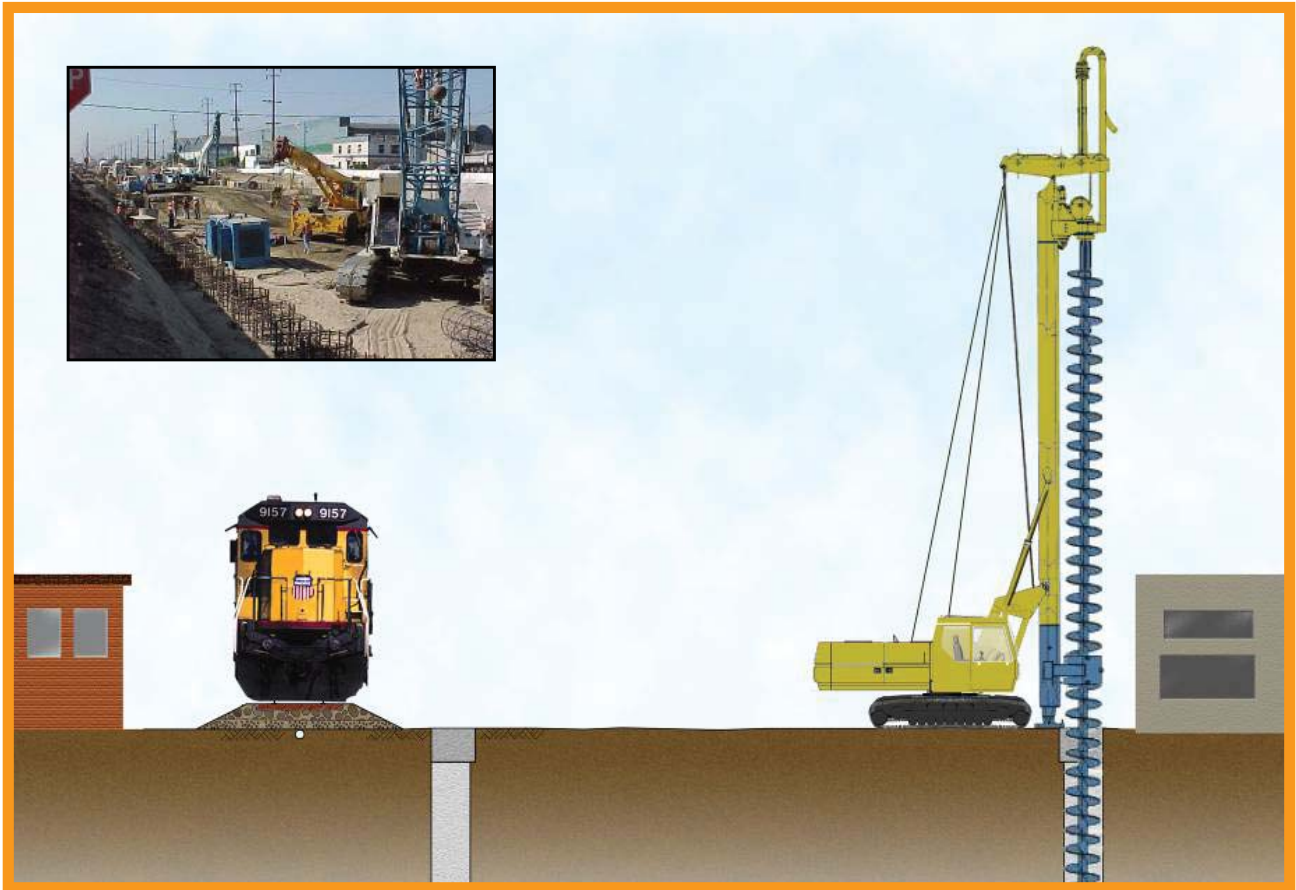
ROW PHASE

- **Required 62 Property Interests**
 - **1 Full take**
 - **55 Permanent and Temporary Construction Easements**
 - **6 Right of Entry Permits**
 - **Acquisition began in November 4, 2010 and ROW was certified by CALTRANS in June 21, 2011 (8 Months)**



How to Build the Trench







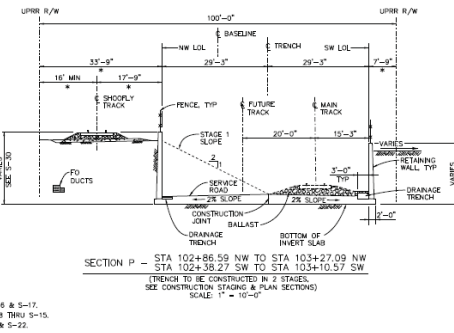
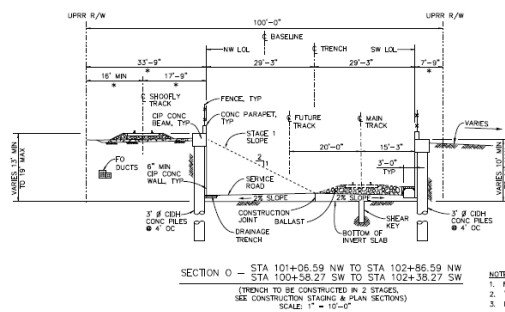
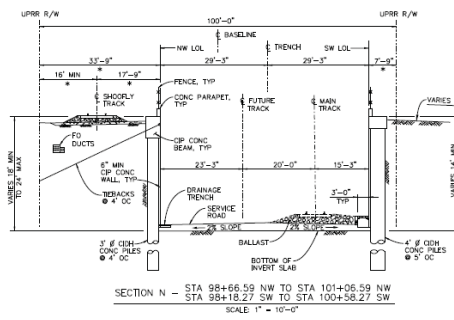
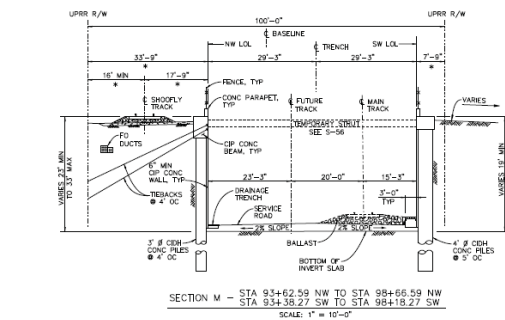
Bottom Slab Concrete Pours



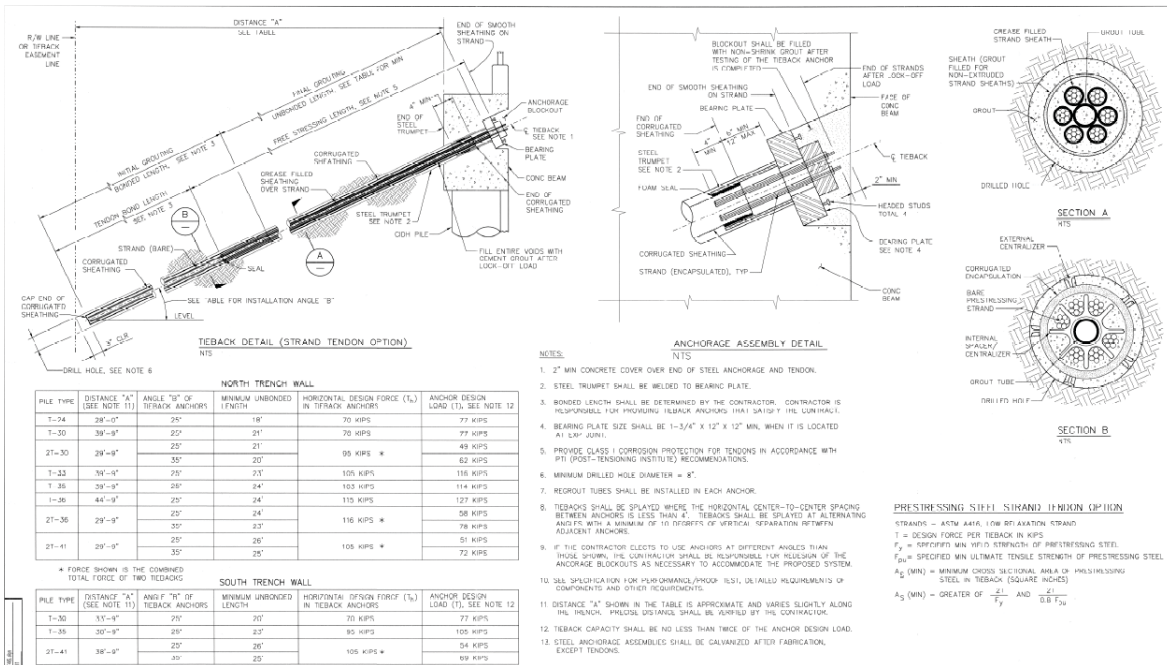
Walls Getting Finished



Trench Cross Section



- NOTES:
1. FOR PILE TIP ELEVATIONS, SEE 5-16 & 5-17.
 2. "4" - DIMENSIONS VARY, SEE 5-8 THRU 5-10.
 3. FOR ADDITIONAL NOTES, SEE 5-8 & 5-22.



Tie Back Info

NORTH WALL ANCHORS							
TYPE	ROW	NO. OF ANCH.	TIEB. ANGLE [deg.]	Design Load [kips]	Test Load [kips]	Lock-off Load [kips]	BAR DIA. or NO. STRANDS
T-30	A	78	25	148	296	148	7
T-35	A	60	35	221	442	221	10
T-36	A	64	25	212	424	212	10
T-36	A	4	25	212	424	212	10
T-36	A	16	25	212	424	212	10
2T-36	A	160	35	120	240	120	6
T-33	A	48	25	184	368	184	8
T-33	A	3	25	184	368	184	8
T-33	A	88	25	184	368	184	8
2T-36	A	98	35	120	240	120	6
2T-41	A	433	25	51	102	51	1" GR150 BAR
2T-41	B	433	35	72	144	72	4
2T-36	A	84	35	120	240	120	6
2T-36	A	33	35	120	240	120	6
2T-30	A	90	25	76	152	76	4
T-24	A	98	25	98	196	98	5
Total		1724					

SOUTH WALL ANCHORS							
TYPE	ROW	NO. OF ANCH.	TIEB. ANGLE [deg.]	Design Load [kips]	Test Load [kips]	Lock-off Load [kips]	BAR DIA. or NO. STRANDS
T-30	A	78	25	148	296	148	7
T-35	A	60	35	221	442	221	10
T-36	A	67	35	221	442	221	10
T-36	A	3	35	221	442	221	10
T-35	A	134	35	221	442	221	10
T-35	A	3	35	221	442	221	10
T-35	A	87	35	221	442	221	10
T-35	A	127	35	221	442	221	10
2T-41	A	133	25	137	274	137	6
2T-41	A	12	25	137	274	137	6
2T-41	A	149	25	137	274	137	6
2T-36	A	56	25	115	230	115	5
Total		915					

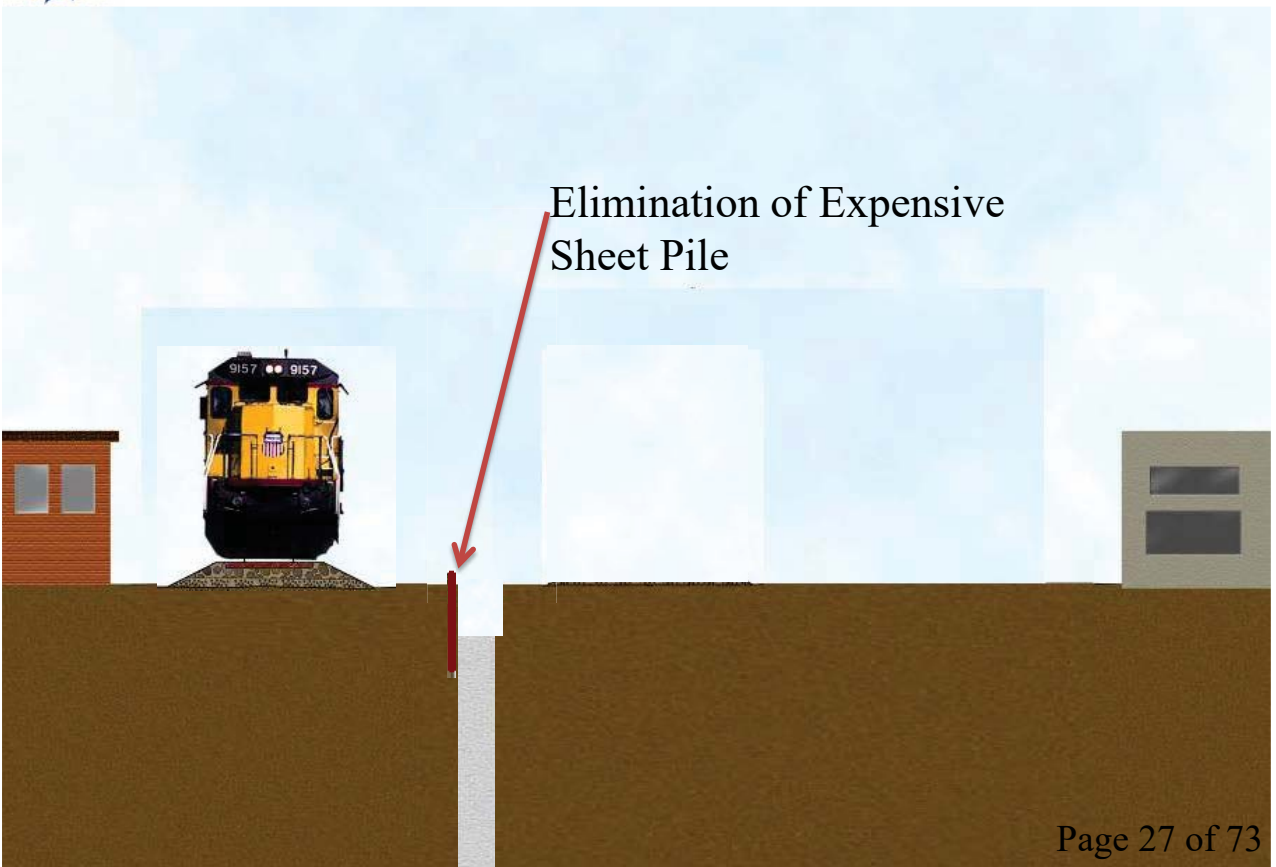
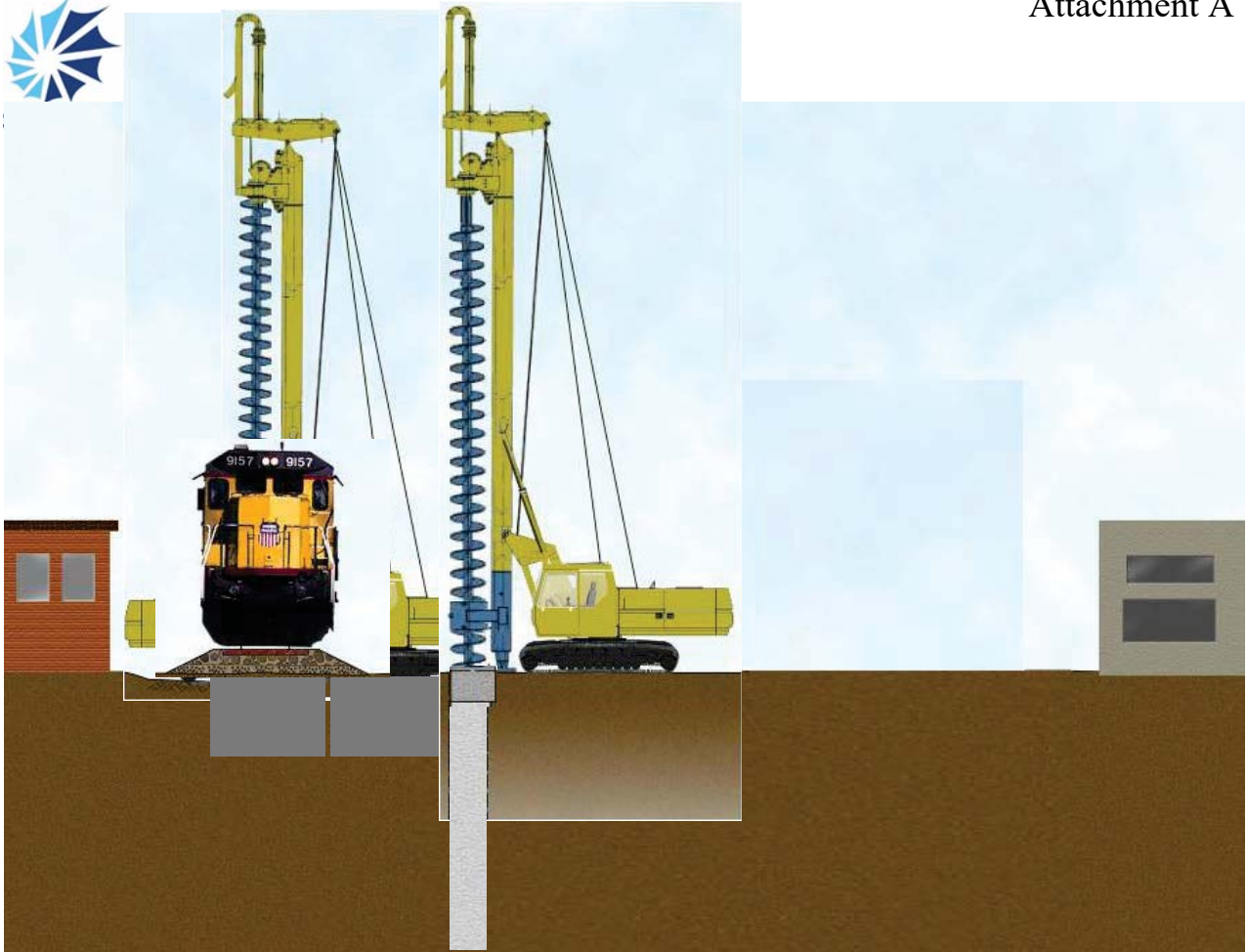


General Factoid of SGT

- Total number of CIDH: 3,501
- Average pile length: 52 ft
- Total number of permanent tie backs: 2,639
- Total Length of concrete slab: 7,795 ft
- Excavation amount: ~500,000 CY
- Dump Trucks: ~33,365
- Concrete Truck: ~6,507



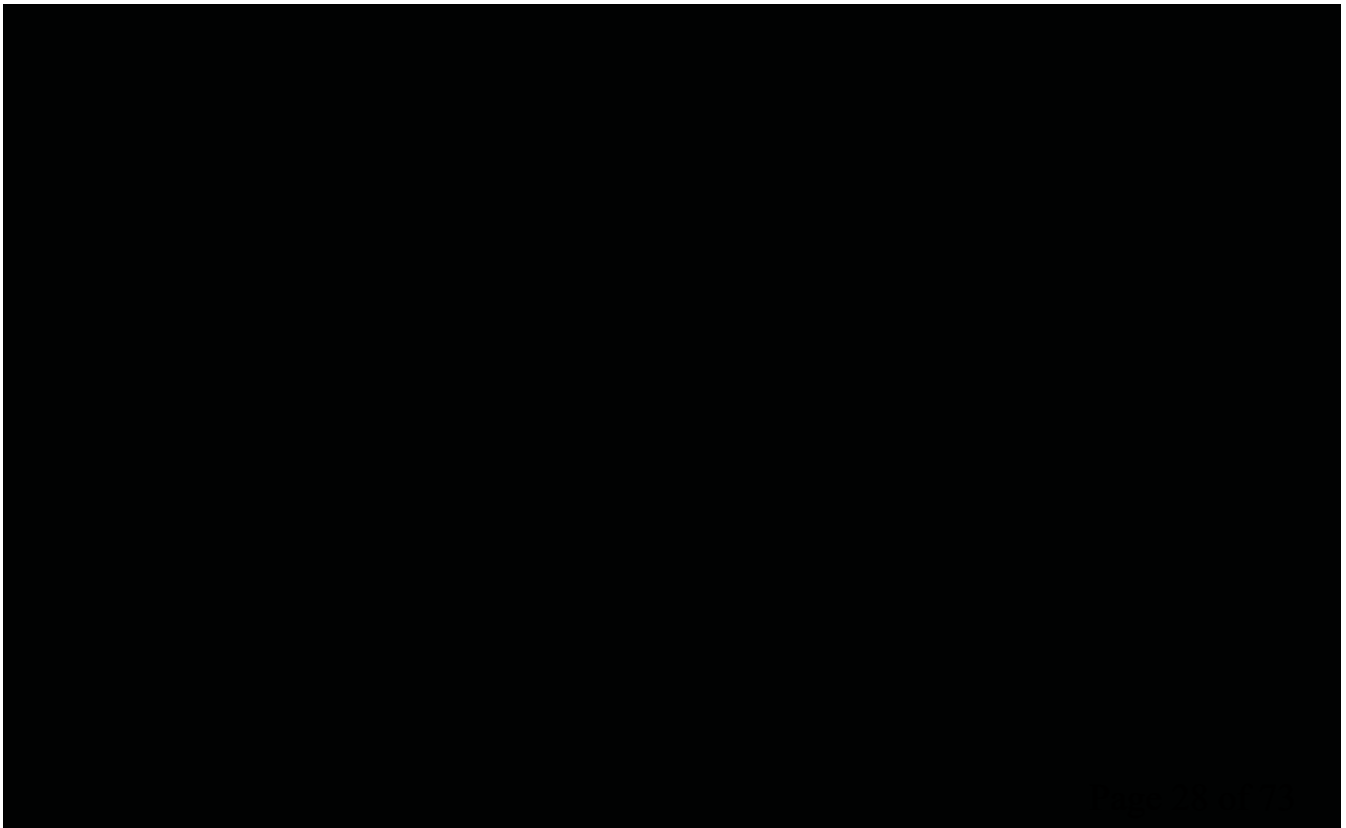
Value Engineering Success



Elimination of Expensive Sheet Pile



Time Lapse



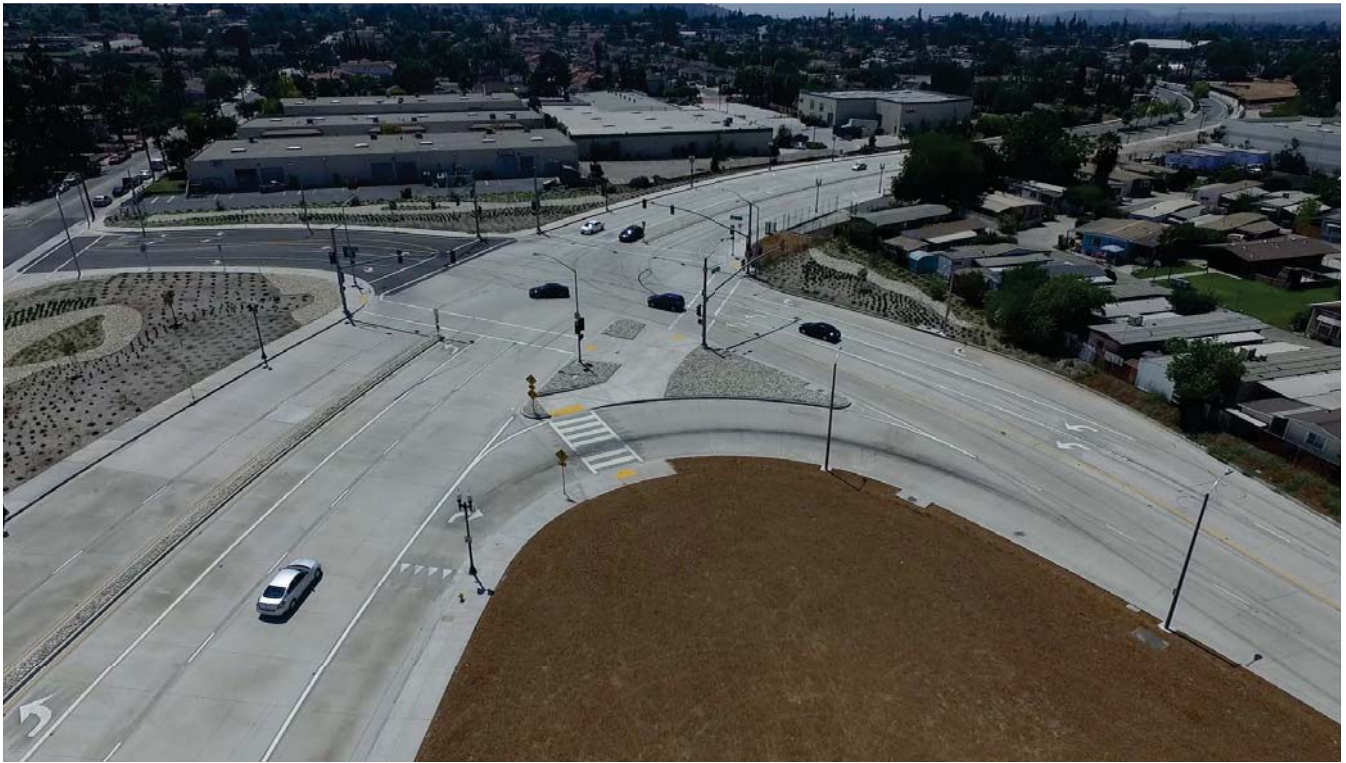


Key Timeframes

- **Project was completed Summer of 2018.**
- **Delays to the Job were attributed to Union Pacific Railroad and floods that occurred Winter 2016/Spring 2017**



Typical Under Pass Grade Separation



Atypical Over Pass Grade Separation





Conclusion

- **Questions & Answers**

DATE: April 15, 2019
TO: SGVCOG Public Works TAC
FROM: Marisa Creter, Executive Director
RE: LA Metro's Arterial Performance Measurement Pilot Program

RECOMMENDED ACTION

For information only.

BACKGROUND

In 2014, LA Metro launched an Arterial Performance Measurement Framework initiative to assess the feasibility and practicality of developing a countywide Arterial Performance Measurement Program. After feasibility studies and analyses determined that such a program is feasible and cost-effective, Metro launched an Arterial Performance Measurement Pilot Program in 2017. The pilot is part of a larger Countywide Baseline Conditions Analysis program, titled "Measure Up!", the purpose of which is to evaluate the performance of arterials throughout LA County to develop countywide baseline in support of the Arterial Performance Measurement Framework. This arterial conditions and performance analysis program will provide local jurisdictions with quantitative data and information which can inform these municipalities and communities for future project planning, and the greatest arterial system needs.

This pilot program is meant to evaluate and test an Arterial Performance Monitoring Tool to assess arterial network performance in one of the nine subregions in Los Angeles County. This project consists of utilizing comprehensive arterial volume and travel time data to develop a detailed measurement and performance tool which provides substantive and quantitative data for cities to analyze the conditions of their roads and arterials. There were multiple tool technologies that were considered for this project, and ultimately, it was determined that the iPeMS system was the most practical for cities to use. The pilot project and monitoring tool also utilizes INRIX 3rd Party Speed Data. The arterial performance tool includes data about speed, travel time, travel time index, travel time delay, level of services, vehicle miles travelled, vehicle hours travelled, and vehicle hours of delay (relative to different speed limits and road capacities).

At the October 2017 Public Works TAC Meeting, LA Metro and System Metrics Group gave an initial presentation on the background, purpose, and content of the "Measure Up!" arterial conditions analysis initiative. Metro also announced that the SGV subregion was selected for the Arterial Performance Measurement Pilot. Then, at the January 2018 Public Works TAC Meeting, representatives from LA Metro, TransLink Consulting, and Iteris provided presentation which was both a follow-up presentation to the "Measure Up!" Countywide Baseline Conditions Analysis Program and a presentation which introduced the Arterial Performance Measurement Pilot for the SGV. A presenter from Iteris also gave demonstrations on how to utilize and analyze the functions of the iPeMS system.

REPORT


The arterial analysis pilot test project for the SGV subregion officially began in January 2018, and closed in December 2018. LA Metro held a training session for local cities and jurisdictions in February 2018, and also distributed follow-up surveys in March and April 2018. At the May 2018 Public Works TAC meeting, representatives from LA Metro, TransLink, and Iteris presented the results of the Arterial Performance Measurement Pilot program and study, as well as the framework and development of the pilot project.

NEXT STEPS

The Measure Up! Pilot program has now been extended through August 2019, and this project now includes real-time arterial performance data for all sub-regions of Los Angeles County, whereas the original pilot just included data for the San Gabriel Valley sub-region. Since the pilot has been extended, Metro would like to conduct outreach with local agencies in order to provide assistance using case studies and examples of how to utilize the Baseline Conditions Analysis Tool and the iPeMS system. The data in these tools can help cities with planning and operational traffic analysis for local developments.

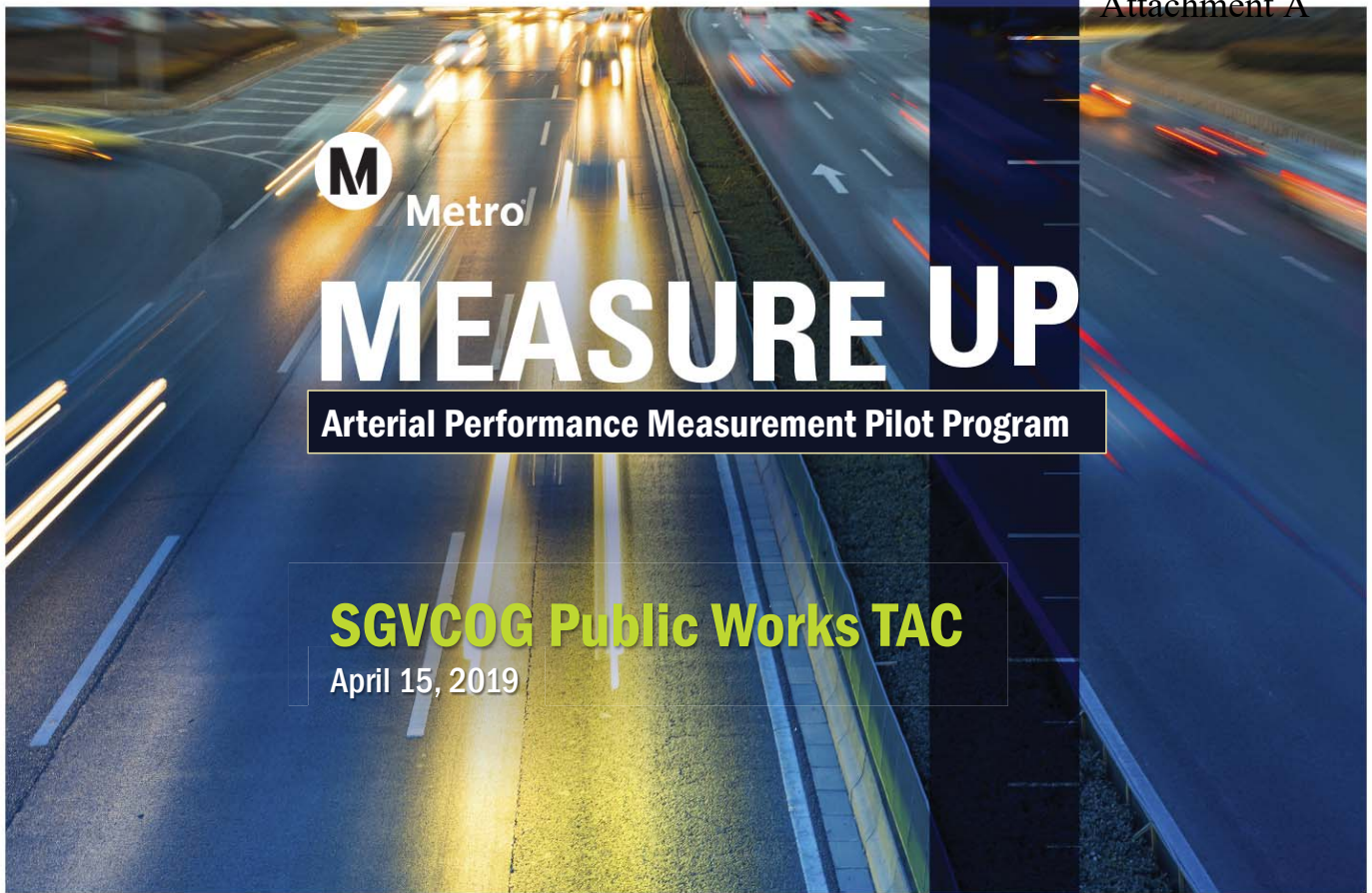
In addition to the presentation to the Public Works TAC, Metro will also be able to conduct one-on-one training sessions with cities. Interested cities should contact Celine Chen of LA Metro for this training.

Prepared by: 
Peter Duyshart
Project Assistant

Approved by: 
Marisa Creter
Executive Director

ATTACHMENTS

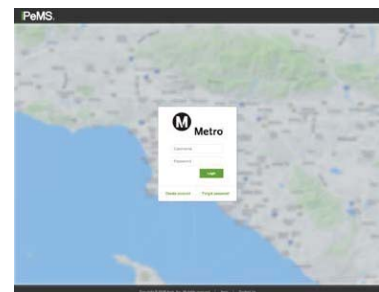
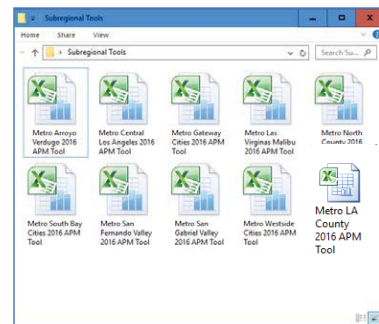
Attachment A: Metro Pilot Program Extension Presentation, April 2019 -- Page 35
Attachment B: "Measure Up!" Project Fact Sheet -- Page 44



Enhancing Performance-Based Decision Making

Measure Up (Arterial Performance)

- Countywide Arterial Performance Measurement Baseline Conditions Analysis
 - 2016 Baseline
 - Currently being updated with 2018 data
- Arterial Performance Measurement Pilot
 - Countywide tool now available
 - Presented today



Arterial Performance Measurement Pilot

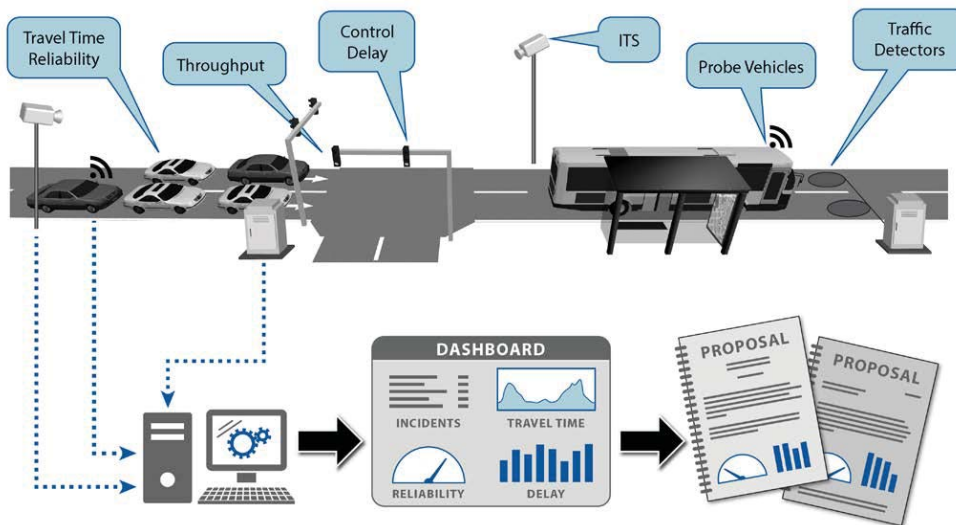
- Be able to assess mobility performance measures on arterial corridors
- Arterial performance measurement tool to support local agency and sub-regional operations and planning efforts
- Data-driven decision-making
- <https://metro.iteris-pems.com/>



Arterial Performance Measurement Framework

1. Select Performance Measures

2. Identify Data Sources



3. Data Management: Integrate and Validate Data

4. Develop Performance Measurement Tool

5. Apply Framework for Data-Driven Decisions

Performance Measures Selected:

- Vehicle Miles Travelled (VMT)
- Vehicle hours of delay
- Hourly/daily volumes (flow)
- Average travel speed
- Average travel time
- Travel time variability
- (Travel time) Reliability
- Others (persons, trucks)



Online Performance Measurement Tool

- iPeMS

- Online roadway performance monitoring tool (freeways and arterials)
- Data, performance measures, route congestion, map animations, etc.
 - Reports, charts, and export
- Using HERE real-time crowd-source data
 - Real-time continuous speed data every minute by short links (data is archived)
- Manual traffic volume collected on selected arterials (as part of Countywide Arterial Performance Measurement Baseline Analysis)
 - About 200 arterial corridors in County taken 2017 and 2018
 - Some provided by local agencies



5

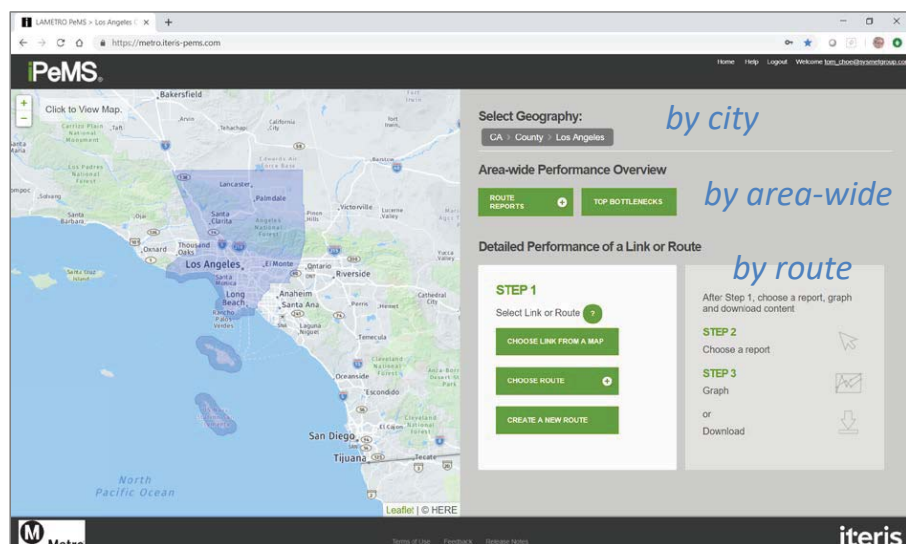
Arterial Performance Measurement Pilot
Enhancing Performance-Based Decision Making

Online Performance Measurement Tool

- iPeMS (<https://metro.iteris-pems.com/>)

- First, apply for an online account (no cost) to get user name and psswd
- Then login

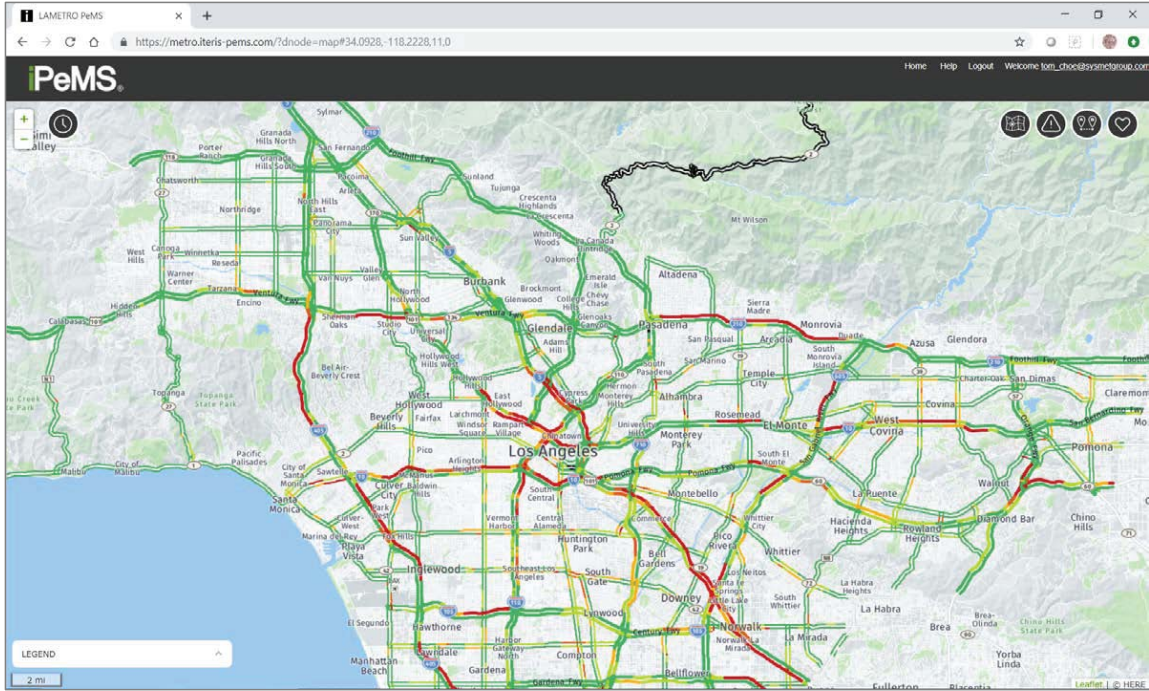
real-time map



6

Arterial Performance Measurement Pilot
Enhancing Performance-Based Decision Making

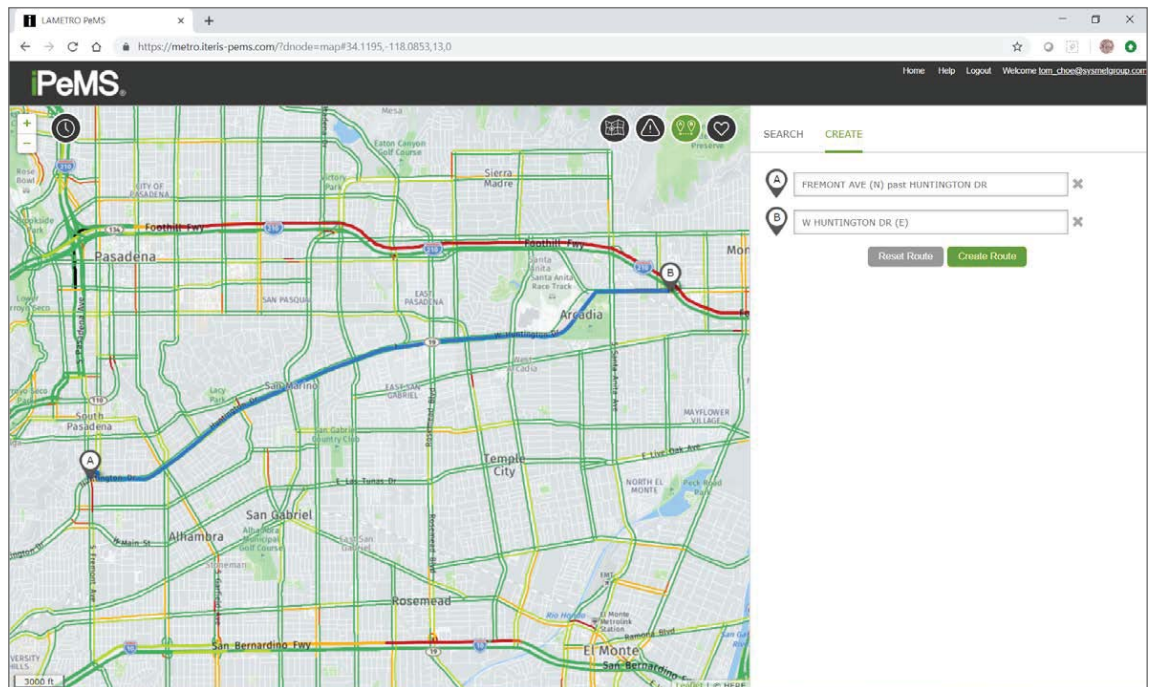
Online Performance Measurement Tool



7

Arterial Performance Measurement Pilot
Enhancing Performance-Based Decision Making

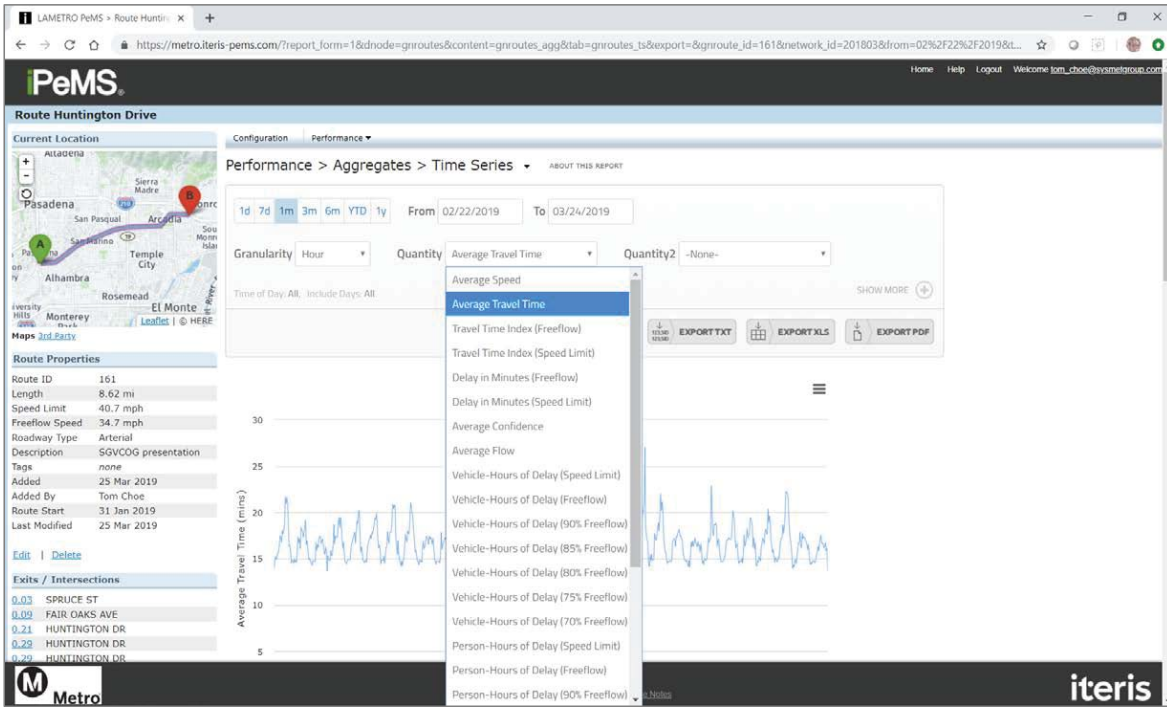
Online Performance Measurement Tool



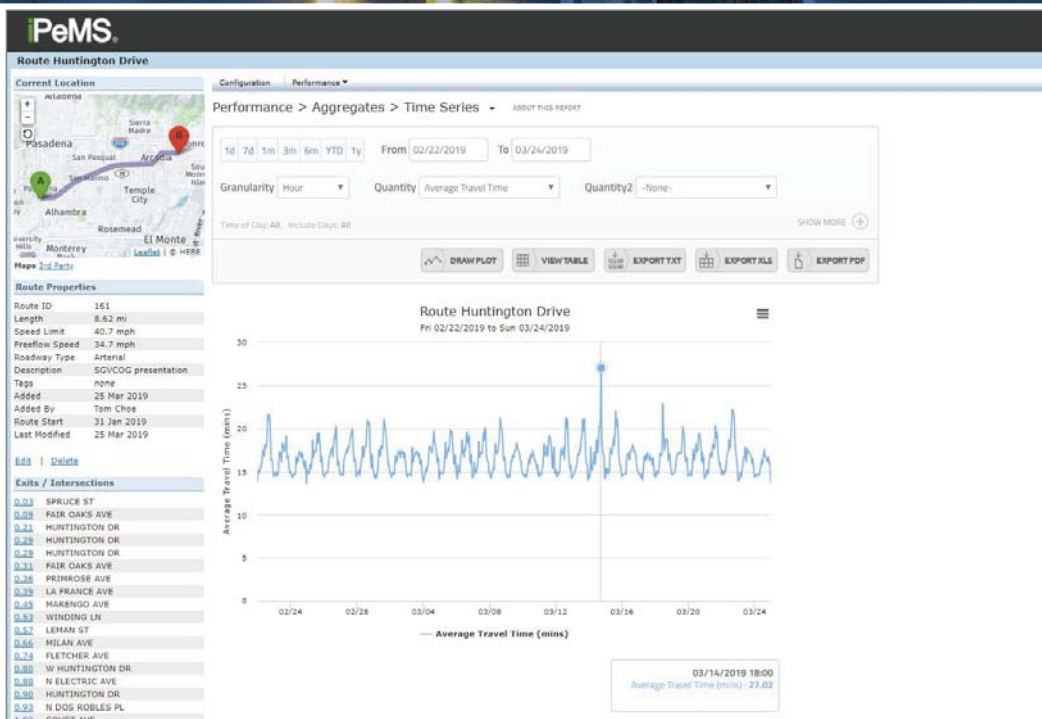
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Arterial Performance Measurement Pilot
Enhancing Performance-Based Decision Making
 Page 38 of 73

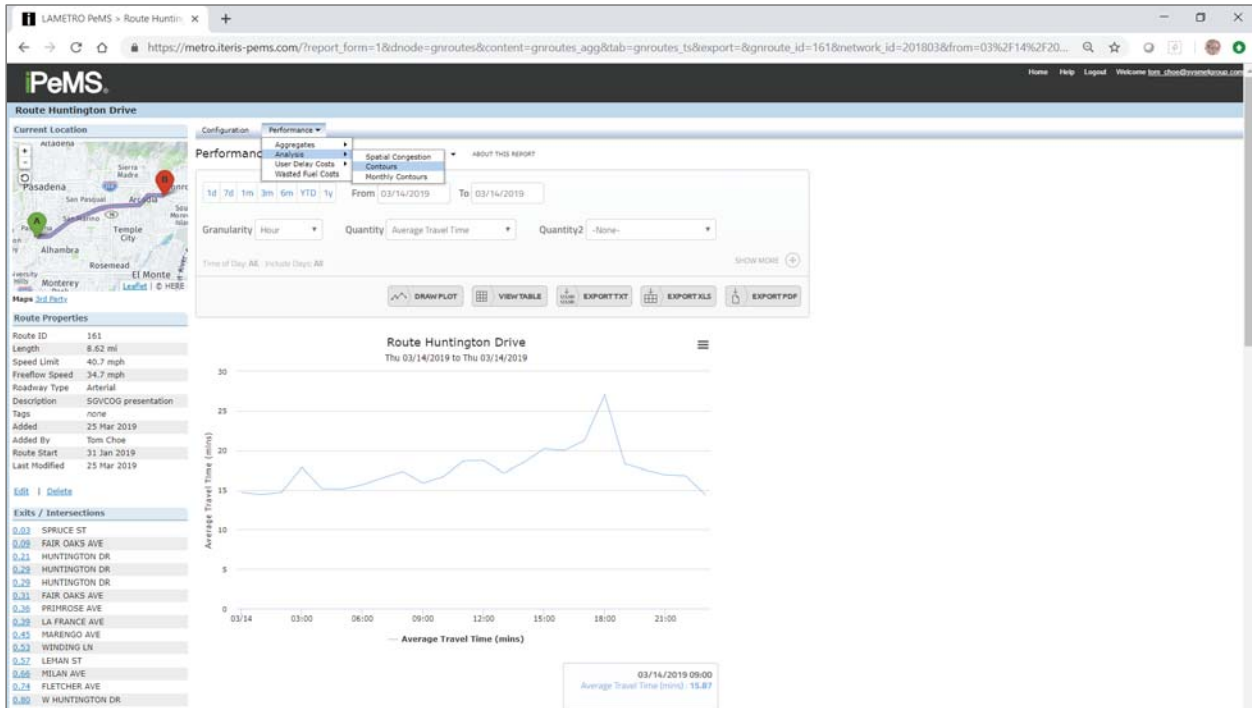
Online Performance Measurement Tool



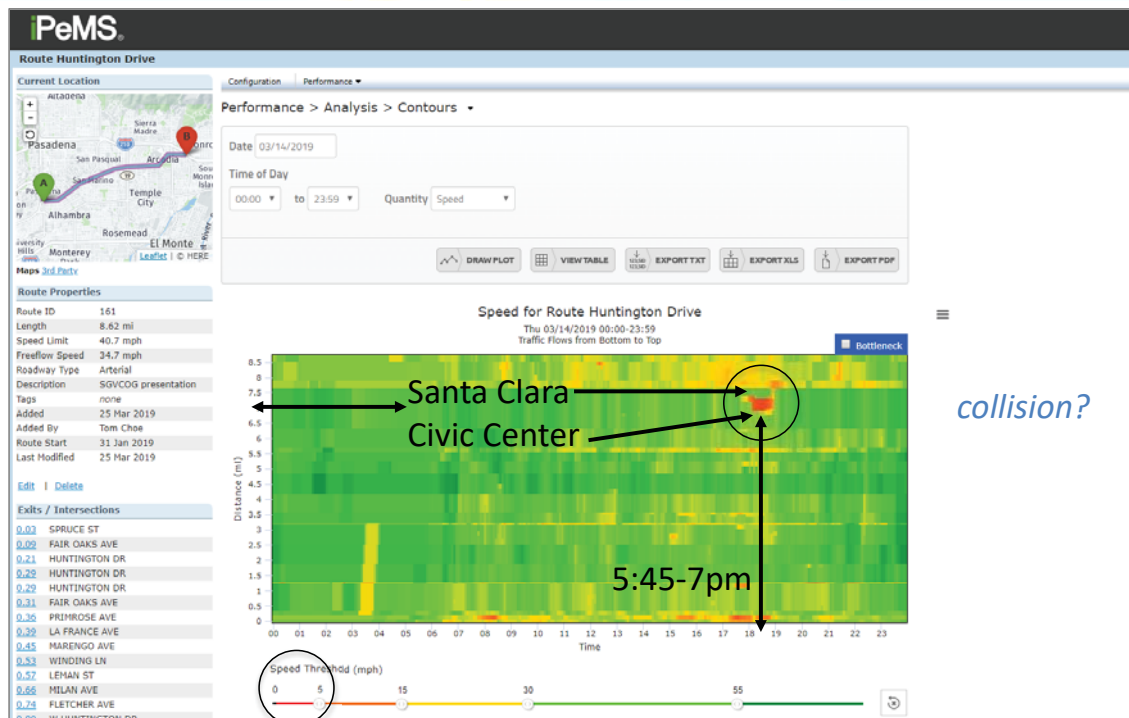
Online Performance Measurement Tool



Online Performance Measurement Tool



Online Performance Measurement Tool



Online Performance Measurement Tool

Thursday, March 14th

At 5:45 p.m., Engine 106, Truck 105, Rescue Ambulance 105, and Battalion 105, responded to a traffic collision on West Huntington Drive. Upon arrival, fire personnel found a two-vehicle accident with one person entrapped within a vehicle. Crews evaluated an altered male patient experiencing head pain. Another patient was extricated from the vehicle, placed in C-collar to immobilize the head and neck, and transported to Huntington Memorial Trauma Center for further evaluation and care.



Online Performance Measurement Tool

Detailed Route Reports

Aggregates Reports

Timeseries

- Shows variables over time

Time of Day

- Shows the averages over the time of day
- What is the typical speed at 7am?
- This plot is used to review typical weekday traffic patterns.

Day of Week

- Review the difference in performance between the days of the week
- How is a Monday's performance different from a Wednesday?

Analysis Reports

Spatial Congestion

- Congestion along the length of the route

Contours

- Visual heat map of congestion in time and space
- Understand where and when congestion is occurring

Monthly Contours

- Same as Contour plots, except there is a plot for each day in a month.
- Review congestion trends across a month
- Visually review the route reliability

Congestion Cost Reports

User Delay Cost

- User delay cost, for passenger cars and trucks

Wasted Fuel Cost

- Wasted fuel cost due to congestion, for passenger cars and trucks, based on EPA models

Online Performance Measurement Tool

- Features (to name a few...)
 - Aggregate data to compare minutes, hours, days, weeks, and months
 - Easy to read reports, charts, and diagrams
 - Export tables and charts into MS Word or Excel (txt, xls, pdf)
 - Navigate by map or by route list table
 - Create multiple paths travel routes (monitor detours, commutes)
 - Speed map animation (“play back” speed condition on any day in past)
 - Measure congestion delay, queues, speeds, travel times, bottlenecks
 - Estimate user delay costs, wasted fuel costs
 - Favorites (save animation) and Alerts (by email)

Online Performance Measurement Tool

Develop a state of the
system arterial report
for your region

Do a Before/After
study

Evaluate
response to
an event

Access data
quickly



Prioritize projects

Conduct a
Corridor Study

Address Council
or stakeholder
technical
questions

Justify need for
upgrading a signal
system

Eva Pan Moon

LA Metro Highway Program

(213) 418-3285

PanE@metro.net

Shrota Sharma

LA Metro Highway Program

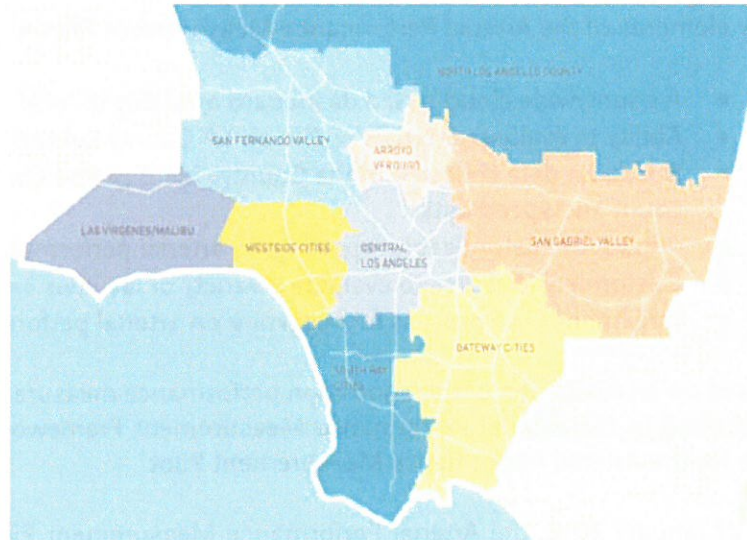
(213) 418-3058

SharmaS@metro.net

Project Fact Sheet

Background

Over the years, the Los Angeles County Metropolitan Transportation Authority (Metro) has been closely collaborating with its local partner agencies to implement a wide range of arterial improvements including signal synchronization, ITS investments, and bus speed improvements to improve mobility and reliability in the County. Understanding how well a transportation system performs would greatly help target the right projects to address local and regional mobility and reliability needs.



In 2014, Metro conducted the Arterial Performance Measurement Framework initiative to assess the feasibility of developing a countywide Arterial Performance Measurement Program. The study demonstrated that the concept of a countywide Arterial Performance Measurement Program is feasible. To further provide a proof of concept, the Arterial Performance Measurement Pilot was initiated in 2017 to test a vendor analytical package within a subregion of Los Angeles County (LA County).

Arterial Performance Measurement Pilot

The Arterial Performance Measurement Pilot will test the effectiveness of a performance monitoring analytical package for LA County's complex arterial and highway system. The purpose of this pilot is to evaluate an analytics package that could best serve LA County and its subregions. The objectives of this Pilot Project are to:

- Evaluate and test an Arterial Performance Monitoring Tool to assess arterial network performance.
- Conduct a pilot test based on a subregion in LA County.
- Utilize comprehensive arterial volume and travel time data.
- Collect user group input and assessments.
- Demonstrate applicability for other subregions.



Metro

MEASURE UP

ARTERIAL PERFORMANCE MEASUREMENT PILOT

Using a combination of recent third party speed data and volume data collected as part of the Countywide Baseline Conditions project, the Pilot Project will evaluate the performance of arterials using metrics described in Arterial Performance Measurement Program. Performance measures will include average speeds and travel times, vehicle and person miles traveled, and vehicle and person hours of delay

Vendor Analytical Tool

Key elements of the Arterial Performance Measurement Pilot's vendor analytical tool includes:

- A countywide cloud-based dashboard available to local agencies.
- Ability to evaluate arterials within an LA County subregion.
- Builds on data collected in the Countywide Baseline Conditions Analysis, including traffic count and speed data.
- Allows for customizable reporting on arterial performance for a variety of metrics.
- Customizable routes to evaluate a variety of facilities and services.
- Streamlines the process for reporting on arterial performance projects.

Based on an evaluation of transportation performance measures, usability, technical and cost criteria as described in the Arterial Performance Measurement Framework, iPeMS[®] offered the most applicable use for the Arterial Performance Measurement Pilot.

As of January 2018, the Arterial Performance Measurement Pilot analytical tool is available for public agencies to demonstrate and use. To access the analytical tool, please go to the following link:

<http://lametro.iteris-pems.com/>

Create an account using your agency email address. Account applications submitted with a pre-authorized agency e-mail will receive an automated account approval message within a few minutes. All other applications are reviewed within 1-2 business days by project personnel.

Project Timeline

January to December 2018

Contact Us:

For more information about the Arterial Performance Measurement Pilot project, please contact:

Eva Pan

(213) 418-3285

PanE@metro.net

Shrota Sharma

(213) 418-3058

SharmaS@metro.net



DATE: April 15, 2019

TO: San Gabriel Valley Council of Governments Public Works TAC

FROM: Marisa Creter, Executive Director

RE: **Measure M Metro Active Transportation (MAT) Program**

RECOMMENDED ACTION

For information only.

BACKGROUND

The Active Transportation Strategic Plan is Metro's effort for all of LA County to pinpoint strategies to increase walking, bicycling, and transit use throughout Los Angeles County. As part of this Strategic Plan, Metro worked to identify corridors which would serve a plethora of adjacent residents as well as transit riders, and would facilitate an increase in active transportation and first/last mile activity. In order to develop this strategic plan, Metro collaborated with a wide variety of stakeholders, including local and regional agencies to identify policies and infrastructure recommendations. The Strategic Plan includes a list of priority first/last mile sites as well as priority active transportation regional corridors. The full comprehensive list of these projects can be found in Attachment A. Additionally, Attachment B includes a San Gabriel Valley-only list of active transportation priority corridors, and Attachment C includes a San Gabriel Valley-only list of first/last mile priority locations.

Under Measure M, which was a ½-cent sales tax measure for county-wide transportation projects that passed in November 2016 with a supermajority of the vote in Los Angeles County, 2%, or \$2.4 billion, of these funds are allotted to the Measure M Active Transportation Fund. Of the \$2.4 billion, \$365 million are dedicated to the LA River Path, while \$1.16 billion of the funds are reserved for a Metro discretionary fund. This leaves \$857 million over 40 years for a competitive active transportation fund, which Metro calls the Metro Active Transportation (MAT) Program.

In order to align with the Strategic Plan, eligible activities for the competitive MAT Program are projects which have been identified in the Strategic Plan's FLM Priority Network and Regional Active Transportation Corridors. All phases of eligible projects are eligible for MAT funding, though planning activities are limited to 0.5% of total costs. Program funding cycles are expected to be two to five years in length, and Metro projects for each cycle will be based on the transportation priorities at the time of the cycle. The first cycle, Cycle 1, will last three to five years, and will have about \$15 million available per year. More specifically, funding will be split 50%/50% between FLM and AT projects, as up to 10 FLM projects will be funded, and up to 5 AT projects will receive funding. As with all cycles, Metro will be focusing on funding projects from the FLM Priority Networks and the Regional Active Transportation Corridors. The main objectives and points of emphasis for these sub-programs are as follows:

First/Last Mile Priority Network:

- Address existing stations and stops identified by Board Motion
- Deploy rapidly in a concentrated radius
- Fund design through implementation
- Test FLM Toolkit
- Pilot streamlined approval process

Regional Active Transportation Corridors:

- Move the Active Transportation Strategic Plan vision into action
- Create multi-jurisdictional active transportation corridors
- Establish lasting partnerships
- Build upon recent experience
- Create a pipeline for strategic investment.

In order to narrow down the inventory range of eligible projects, Metro has established prioritization criteria for the FLM and AT projects, though the criteria are subject to Metro PAC input. The criteria include evaluating projects based on equity, safety, and mobility & connectivity. Table 1 illustrates the scoring and prioritization criteria:

Criteria	Specific Data Inputs	Project Type & Applicability	
		First/Last Mile	AT Corridors
Equity	Disadvantaged Communities (DAC) - CalEnviroScreen	X	X
	California Healthy Places Index	X	X
	SCAG's Communities of Concern	X	X
Safety	TIMS / SWITRS	X	X
	SCAG's High Injury Network		X
	City of LA's High Injury Network		X
Mobility & Connectivity	Metro & Municipal Transit Agencies' Daily Boardings	X	
	First/Last Mile Connectivity to Major Transit Stops		X
	SCAG's Regional Bikeway Network		X
	Measure M Transit/Rail Project Alignments		X

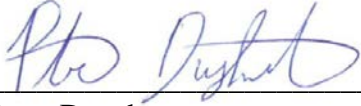
**Table 1
MAT Program Prioritization Criteria**


REPORT

Once the highest scoring projects are identified, Metro plans to solicit interest from the jurisdictions in which each of the respective projects are located, including local support, local commitments, and the capacity for coalition-building. Projects which are determined to have buy-in from the jurisdictions will move forward with the funding award process, and receive funding for the project. The project will be implemented within the cycle timeframe.

NEXT STEPS

The Metro PAC will continue to provide comments on the MAT Program guidelines over the course of the next couple of months. Then, at the June PAC meeting, the PAC will provide feedback on a detailed Cycle 1 package. The Metro Board is expected to take action on a Cycle 1 plan sometime in Summer 2019.

Prepared by: 
Peter Duyshart
Project Assistant

Approved by: 
Marisa Creter
Executive Director

ATTACHMENTS

- Attachment A – Active Transportation and First/Last Mile Priority Corridors -- Page 50
- Attachment B – Active Transportation Strategic Plan, Regional Corridors (SGV)-- Page 60
- Attachment C – First/Last Mile Priority Network Projects List (SGV)-- Page 62
- Attachment D – Metro Active Transportation (MAT) Program Slides -- Page 63

April 2, 2019

Active Transportation Strategic Plan**First/Last Mile Priority Network**

Name (Alphabetical)	Jurisdiction	Route Type
110 HOV / Adams	Los Angeles	BRT
1st	Long Beach	LRT
1st ST/Central	Los Angeles	Rail
23rd	Los Angeles	LRT
2nd St/Broadway	Los Angeles	Rail
2nd St/Hope	Los Angeles	Rail
4th / Colorado	Santa Monica	LRT
5th	Long Beach	LRT
6th / San Pedro	Los Angeles	Bus
Acton / Vincent Grade	Unincorporated	Rail
Alameda / 7th	Los Angeles	Bus
Aliso / Pico	Los Angeles	LRT
Allen	Pasadena	LRT
Alvarado / Beverly	Los Angeles	Bus
Alvarado / Sunset	Los Angeles	Bus
Anaheim	Long Beach	LRT
Artesia	Compton	LRT
Arts District / Little Tokyo	Los Angeles	LRT
Atlantic / Cesar E. Chavez	Monterey Park	Bus
Atlantic / Florence	Cudahy	Bus
Atlantic / Olympic	Unincorporated	Bus
Atlantic / Whittier	Unincorporated	Bus
Avalon	Los Angeles	LRT
Avalon / Florence	Los Angeles	Bus
Avalon / Manchester	Los Angeles	Bus
Avalon / Vernon	Los Angeles	Bus
Aviation / Century	Los Angeles	BRT
Azusa / Alameda	Azusa	LRT
Azusa / Citrus	Glendora	LRT
Balboa	Los Angeles	BRT
Baldwin Park	Baldwin Park	Rail
Beacon St/1st St	Los Angeles	LRT
Benton Way / Beverly	Los Angeles	Bus
Beverly / Vermont	Los Angeles	Heavy rail
Boyle Heights / Mariachi Plaza	Los Angeles	LRT
Brand / Broadway	Glendale	Bus
Broadway / Florence	Los Angeles	Bus
Broadway / Vernon	Los Angeles	Bus
Bundy / Santa Monica	Los Angeles	Bus

April 2, 2019

Name	Jurisdiction	Route Type
Burbank	Burbank	Rail
Burbank Airport	Burbank	Rail
Cadillac / Venice	Los Angeles	Bus
Cal State L.A.	Los Angeles	BRT
Cal State L.A.	Unincorporated	Rail
Canoga	Los Angeles	BRT
Central / 6th	Los Angeles	Bus
Central / 7th	Los Angeles	Bus
Central / Colorado	Glendale	Bus
Central / Vernon	Los Angeles	Bus
Channel / 7th	Long Beach	Bus
Chatsworth	Los Angeles	Rail / BRT
Cherry / Pacific Coast Hwy	Long Beach	Bus
Chinatown	Los Angeles	LRT
Civic Center	Los Angeles	Heavy rail
Claremont	Claremont	Rail
Collegian / Cesar E. Chavez	Monterey Park	Bus
Colorado / 17th	Santa Monica	LRT
Commerce	Commerce	Rail
Commerce / Montebello	Montebello	Rail
Compton	Compton	LRT
Covina	Covina	Rail
Crenshaw	Hawthorne	LRT
Crenshaw / Adams	Los Angeles	Bus
Crenshaw / Martin Luther King Jr.	Los Angeles	BRT
Crenshaw / Pico	Los Angeles	Bus
Crenshaw / Slauson	Los Angeles	BRT
Crenshaw / Venice	Los Angeles	Bus
Crenshaw / Washington	Los Angeles	Bus
Culver City	Los Angeles	LRT
Cypress Park / Lincoln Heights	Los Angeles	LRT
Daly / Broadway	Los Angeles	Bus
De Soto	Los Angeles	BRT
Del Amo	Unincorporated	LRT
Del Mar	Pasadena	LRT
Douglas	El Segundo	LRT
Duarte / Highland	Duarte	LRT
East L.A. Civic Center	Unincorporated	LRT
Echo Park / Sunset	Los Angeles	Bus
El Monte	El Monte	Rail
El Monte Busway	El Monte	Bus
El Segundo	El Segundo	LRT

April 2, 2019

Name	Jurisdiction	Route Type
Expo / Bundy	Los Angeles	LRT
Expo / Crenshaw	Los Angeles	LRT
Expo / Farmdale	Los Angeles	LRT
Expo / La Brea	Los Angeles	LRT
Expo / Sepulveda	Los Angeles	LRT
Expo / Vermont	Los Angeles	LRT
Expo / Western	Los Angeles	LRT
Expo / Westwood	Los Angeles	LRT
Expo Park / USC	Los Angeles	LRT
Fairfax / 3rd	Los Angeles	Bus
Fairfax / Beverly	Los Angeles	Bus
Fairfax / Santa Monica	West Hollywood	Bus
Fairfax / Venice	Los Angeles	Bus
Fairfax Hub / Washington	Los Angeles	Bus
Federal Building Roadway	Unincorporated	Bus
Figueroa / 23rd	Los Angeles	BRT
Figueroa / 7th	Los Angeles	BRT
Figueroa / Sunset	Los Angeles	Bus
Figueroa / Vernon	Los Angeles	Bus
Figueroa / Washington	Los Angeles	BRT
Figueroa St/190th St	Los Angeles	LRT
Fillmore	Pasadena	LRT
Firestone	Unincorporated	LRT
Florence	Unincorporated	LRT
Flower / Olympic	Los Angeles	BRT
Flower / Washington	Los Angeles	BRT
Glendale	Glendale	Rail
Goodrich / Louis	Commerce	Bus
Grand	Los Angeles	LRT
Harbor Beacon Park	Los Angeles	LRT
Harbor Freeway	Los Angeles	LRT
Harbor Fwy/Carson St	Unincorporated	LRT
Harbor Fwy/Pacific Coast Hwy	Los Angeles	LRT
Harbor Gateway Transit Center	Los Angeles	Bus
Harbor Transitway / 37th	Los Angeles	BRT
Harbor Transitway / Manchester	Los Angeles	BRT
Harbor Transitway / Rosecrans	Los Angeles	BRT
Harbor Transitway / Slauson	Los Angeles	BRT
Hawthorne / Lennox	Hawthorne	Bus
Heritage Square / Arroyo	Los Angeles	LRT

April 2, 2019

Name	Jurisdiction	Route Type
Highland / Santa Monica	Los Angeles	Bus
Highland Park	Los Angeles	LRT
Hill / 1st	Los Angeles	BRT
Hoefner / Whittier	Unincorporated	Bus
Hollywood / Highland	Los Angeles	Heavy rail
Hollywood / Vine	Los Angeles	Heavy rail
Hollywood / Western	Los Angeles	Heavy rail
Hoover / Venice	Los Angeles	Bus
Hyde Park	Los Angeles	Rail
Indiana	Unincorporated	LRT
Industry	Industry	Rail
Jefferson / USC	Los Angeles	LRT
La Brea / Florence	Inglewood	BRT
La Brea / Santa Monica	West Hollywood	Bus
La Brea / Venice	Los Angeles	Bus
La Cienega / 3rd	Los Angeles	Bus
La Cienega / Beverly	Los Angeles	Bus
La Cienega / Jefferson	Los Angeles	LRT
Lake	Pasadena	LRT
Lakewood	Downey	LRT
Lancaster	Lancaster	Rail
Laurel Canyon	Los Angeles	BRT
LAX / Aviation	Los Angeles	LRT
LAX City Bus Center	Los Angeles	BUS
Leimert Park	Los Angeles	Rail
Long Beach	Lynwood	LRT
Long Beach Transit Mall	Long Beach	LRT
MacArthur Park / Westlake	Los Angeles	Heavy rail
Manchester / Aviation	Inglewood	BRT
Maravilla	Unincorporated	LRT
Mariposa	El Segundo	LRT
McBean Regional Transit Center	Santa Clarita	BUS
Memorial Park	Pasadena	LRT
Motor / Venice	Los Angeles	Bus
Myrtle / Duarte	Monrovia	LRT
National / Palms	Los Angeles	LRT
Newhall	Santa Clarita	Rail
Nordhoff	Los Angeles	BRT
Normandie / Olympic	Los Angeles	Bus
Normandie / Venice	Los Angeles	Bus
North Hollywood	Los Angeles	Heavy rail
Northridge	Los Angeles	Rail

April 2, 2019

Name	Jurisdiction	Route Type
Norwalk	Norwalk	LRT
Oakford / Whittier	Unincorporated	Bus
Ocean / Wilshire	Santa Monica	Bus
Olive / 5th	Los Angeles	BRT
Olympic / 26th	Santa Monica	LRT
Overland / Venice	Los Angeles	Bus
Pacific	Long Beach	LRT
Pacific / Clarendon	Huntington Park	Bus
Pacific / Florence	Unincorporated	Bus
Pacific / Slauson	Huntington Park	Bus
Pacific/11th St	Los Angeles	LRT
Pacific/15th St	Los Angeles	LRT
Pacific/17th St	Los Angeles	LRT
Pacific/19th St	Los Angeles	LRT
Pacific/1st St	Los Angeles	LRT
Pacific/21st St	Los Angeles	LRT
Pacific/3rd St	Los Angeles	LRT
Pacific/7th St	Los Angeles	LRT
Palmdale	Palmdale	Rail
PCH	Long Beach	LRT
Pershing Square	Los Angeles	Heavy rail
Pico	Los Angeles	LRT
Pierce College	Los Angeles	BRT
Pomona - Downtown	Pomona	Rail
Pomona - North	Pomona	Rail
Rampart / 3rd	Los Angeles	Bus
Redondo Beach	Redondo Beach	LRT
Reseda	Los Angeles	BRT
Roscoe	Los Angeles	BRT
San Fernando / Sylmar	Los Angeles	Rail
San Pedro	Los Angeles	LRT
San Pedro / 7th	Los Angeles	Bus
Santa Clara / 1st	Arcadia	LRT
Santa Clarita	Santa Clarita	Rail
Santa Fe Springs / Norwalk	Norwalk	Rail
Sepulveda	Los Angeles	BRT
Sepulveda / Santa Monica	Los Angeles	Bus
Sepulveda / Slauson	Culver City	Bus
Sherman Way	Los Angeles	BRT
Sierra Valley Madre	Pasadena	LRT
Slauson	Unincorporated	LRT
Soto	Los Angeles	LRT

April 2, 2019

Name	Jurisdiction	Route Type
Soto / Olympic	Los Angeles	Bus
Soto / Whittier	Los Angeles	Bus
South Pasadena	South Pasadena	LRT
Southwest Museum	Los Angeles	LRT
Spring / 1st	Los Angeles	BRT
Sunset / Vermont	Los Angeles	Heavy rail
Tampa	Los Angeles	BRT
Union / Olympic	Los Angeles	Bus
Union Station	Los Angeles	Heavy rail / LRT/BRT
Universal City	Los Angeles	Heavy rail
USC Medical Center	Los Angeles	BRT
Valley College	Los Angeles	BRT
Van Nuys	Los Angeles	Rail
Van Nuys	Los Angeles	BRT
Van Nuys / Chase	Los Angeles	Bus
Van Nuys / Nordhoff	Los Angeles	Bus
Van Nuys / Roscoe	Los Angeles	Bus
Van Nuys / Sherman Way	Los Angeles	Bus
Van Nuys / Vanowen	Los Angeles	Bus
Vermont / 120th	Unincorporated	Bus
Vermont / 92nd	Unincorporated	Bus
Vermont / Adams	Los Angeles	Bus
Vermont / Athens	Unincorporated	Bus
Vermont / Expo	Los Angeles	LRT
Vermont / Florence	Los Angeles	Bus
Vermont / Manchester	Los Angeles	Bus
Vermont / Olympic	Los Angeles	Bus
Vermont / Pico	Los Angeles	Bus
Vermont / Santa Monica	Los Angeles	LRT
Vermont / Slauson	Los Angeles	Bus
Vermont / Venice	Los Angeles	Bus
Vermont / Vernon	Los Angeles	Bus
Vermont / Washington	Los Angeles	Bus
Vernon	Los Angeles	LRT
Veteran Federal Building	Unincorporated	Bus
Via Princessa	Santa Clarita	Rail
Vine / Santa Monica	Los Angeles	Bus
Wardlow	Long Beach	LRT
Warner Center Transit Hub	Los Angeles	BRT
Washington	Los Angeles	LRT
Watts Towers / 103rd	Los Angeles	LRT
West / Florence	Inglewood	BRT

April 2, 2019

Name	Jurisdiction	Route Type
West Campus / State University	Long Beach	Bus
Western / Adams	Los Angeles	Bus
Western / Martin Luther King Jr.	Los Angeles	Bus
Western / Melrose	Los Angeles	Bus
Western / Olympic	Los Angeles	Bus
Western / Pico	Los Angeles	Bus
Western / Santa Monica	Los Angeles	Bus
Western / Slauson	Los Angeles	Bus
Western / Venice	Los Angeles	Bus
Western / Vernon	Los Angeles	Bus
Western / Washington	Los Angeles	Bus
Westwood / Weyburn	Los Angeles	Bus
Westwood / Wilshire	Los Angeles	Bus
Willow	Long Beach	LRT
Willowbrook	Unincorporated	LRT
Wilshire / 4th	Santa Monica	Bus
Wilshire / Normandie	Los Angeles	LRT
Wilshire / Vermont	Los Angeles	Heavy rail
Wilshire / Western	Los Angeles	LRT
Wilshire/Fairfax	Los Angeles	Rail
Wilshire/La Brea	Los Angeles	Rail
Wilshire/La Cienega	Beverly Hills	Rail
Witmer / 6th	Los Angeles	Bus
Woodley	Los Angeles	BRT
Woodman	Los Angeles	BRT
Ximeno / Pacific Coast Hwy	Long Beach	Bus

Corridor	From	To	Total Miles	Subregion	Jurisdiction
1ST-2ND-GLENDALE	FLETCHER DR	EASTERN AVE	8.51	Central Los Angeles	Los Angeles, Unincorporated
223RD-WARDLOW	VERMONT AVE	LONG BEACH BLVD	5.91	Gateway Cities, South Bay Cities	Carson, Long Beach, Los Angeles, Unincorporated
30TH ST	AVE H	AVE P	8.06	North Los Angeles County	Lancaster, Unincorporated
ALAMEDA	SPRING ST	LA RIVER	16.12	Central Los Angeles, Gateway Cities, South Bay Cities	Carson, Compton, Huntington Park, Long Beach, Los Angeles, Lynwood, Unincorporated, Vernon
ALAMEDA-UPRR	LA RIVER	HARRY BRIDGES BLVD	8.31	Gateway Cities, South Bay Cities	Carson, Los Angeles, Unincorporated
ALHAMBRA WASH	SPRR SAN GABRIEL	RIO HONDO	4.63	San Gabriel Valley	Rosemead, San Gabriel, Unincorporated
ALLEN AVE	E ALTADENA DR	ORLANDO RD	3.99	Arroyo Verdugo, San Fernando Valley	Los Angeles, Pasadena, San Marino, Unincorporated
ALTADENA-LONG BEACH	LOMA ALTA DR	LA RIVER	32.12	Arroyo Verdugo, Central Los Angeles, Gateway Cities	Alhambra, Bell Gardens, Commerce, Lakewood, Long Beach, Montebello, Monterey Park, Paramount, Pasadena, San Marino, Signal Hill, South Gate, South Pasadena, Unincorporated
ANAHEIM ST	S WESTERN AVE	PCH	10.26	Gateway Cities, South Bay Cities	Long Beach, Los Angeles
ARROW-BONITA	LIVE OAK AVE	SAN ANTONIO WASH	17.16	San Gabriel Valley	Azusa, Claremont, Covina, Irwindale, La Verne, Pomona, San Dimas, Unincorporated
ARROYO SECO	SAN PASCUAL AVE	AVE 19	4.85	Arroyo Verdugo, Central Los Angeles	Los Angeles, South Pasadena
ARROYO-VERDUGO	VAN NUYS BLVD	YORK BLVD	23.81	Arroyo Verdugo, Central Los Angeles, San Fernando Valley	Glendale, La Canada Flintridge, Los Angeles, Pasadena, South Pasadena
ARTESIA BLVD	COAST	S VERMONT AVE	6.65	South Bay Cities	Gardena, Hermosa Beach, Manhattan Beach, Redondo Beach, Torrance
ARTESIA-HERONDO	COAST	ORANGE COUNTY LINE	22.95	Gateway Cities, South Bay Cities	Artesia, Bellflower, Carson, Cerritos, Compton, La Mirada, Long Beach, Los Angeles, Redondo Beach, Torrance
AVALON BLVD	E IMPERIAL HWY	HARRY BRIDGES BLVD	11.06	Central Los Angeles, Gateway Cities, South Bay Cities	Carson, Los Angeles, Unincorporated
AVE L	70TH ST W	50TH ST E	12.14	North Los Angeles County	Lancaster, Palmdale, Unincorporated
AVE N	50TH ST	SIERRA BIKE PATH	5.34	North Los Angeles County	Palmdale, Unincorporated
AVE P	30TH ST W	50TH ST E	8.11	North Los Angeles County	Palmdale, Unincorporated
AVE S	TOVEY AVE	70TH ST E	7.86	North Los Angeles County	Palmdale, Unincorporated
AVIATION-BNSF-LAX	W MANCHESTER AVE	MANHATTAN BEACH BLVD	5.94	South Bay Cities	El Segundo, Inglewood, Los Angeles, Manhattan Beach
AZUSA AVE	SAN GABRIEL RIVER	COLIMA RD	12.30	San Gabriel Valley	Azusa, Covina, Industry, Unincorporated, West Covina
BADILLO-RAMONA	MISSION-VALLEY SPRR	W BONITA AVE	13.35	San Gabriel Valley	Baldwin Park, Covina, El Monte, San Dimas, Unincorporated, West Covina
BALLONA CREEK	PACIFIC AVE	VENICE BLVD	8.55	Central Los Angeles, Westside Cities	Culver City, Los Angeles
BEVERLY-TEMPLE	SANTA MONICA BLVD	LA RIVER	9.70	Central Los Angeles, Westside Cities	Beverly Hills, Los Angeles, West Hollywood
BIG DALTON WASH	BIG DALTON DEBRIS DAM	WALNUT CREEK	10.84	San Gabriel Valley	Azusa, Baldwin Park, Covina, Glendora, Irwindale, Unincorporated, West Covina
BLOOMFIELD AVE	WHITTIER-UPRR	CARSON ST	9.86	Gateway Cities	Cerritos, Hawaiian Gardens, Lakewood, Norwalk, Santa Fe Springs, Whittier
BNSF-CARSON	AVALON BLVD	W SEPULVEDA BLVD	4.73	South Bay Cities	Carson, Los Angeles
BNSF-SOUTH BAY	BNSF RR	CRENSHAW BLVD	6.04	South Bay Cities	El Segundo, Hawthorne, Lawndale, Redondo Beach, Torrance
BRAND-GLENDALE-HYPERION-HIGHLAND-REDONDO	VERDUGO WASH	RODEO RD	13.68	Arroyo Verdugo, Central Los Angeles	Glendale, Los Angeles
BROADWAY-FOUNTAIN-SANTA MONICA	OCEAN AVE	W SUNSET BLVD	14.24	Central Los Angeles, Westside Cities	Beverly Hills, Los Angeles, Santa Monica, West Hollywood
BUNDY-CENTINELA-INGLEWOOD	SAN VICENTE BLVD	S CENTINELA AVE	6.35	San Fernando Valley, Westside Cities	Culver City, Los Angeles
CARSON ST	N LONG BEACH BLVD	BLOOMFIELD AVE	7.47	Gateway Cities	Hawaiian Gardens, Lakewood, Long Beach
CENTRAL AVE-COMPTON CREEK	E 1ST ST	E ARTESIA BLVD	13.05	Central Los Angeles, Gateway Cities	Compton, Los Angeles, Unincorporated
CENTURY-MLK-PE ROW	ALAMEDA ST	SALT LAKE- UP-PE RR ROW	4.44	Gateway Cities	Lynwood, South Gate, Unincorporated
CHANDLER	LA RIVER	E VERDUGO AVE	13.17	Arroyo Verdugo, San Fernando Valley	Burbank, Los Angeles
CHAVEZ-SUNSET-RIGGIN	N FAIRFAX AVE	ALHAMBRA WASH	18.37	Central Los Angeles, Gateway Cities, San Gabriel Valley	Los Angeles, Monterey Park, Rosemead, Unincorporated
COASTAL ROUTE	VENTURA COUNTY LINE	LA RIVER	63.99	Las Virgenes/Malibu, South Bay Cities, Westside Cities	El Segundo, Hermosa Beach, Long Beach, Los Angeles, Malibu, Manhattan Beach, Palos Verdes Estates, Rancho Palos Verdes, Redondo Beach, Santa Monica, Torrance, Unincorporated
COLIMA RD	TELEGRAPH RD	ORANGE COUNTY LINE	15.09	Gateway Cities, San Gabriel Valley	Diamond Bar, Industry, Unincorporated, Whittier
COLORADO-FOOTHILL	LA RIVER	SAN ANTONIO WASH	34.58	Arroyo Verdugo, Central Los Angeles	Arcadia, Azusa, Claremont, Duarte, Glendale, Irwindale, La Verne, Los Angeles, Monrovia, Pasadena, Pomona, San Dimas, Unincorporated
COYOTE CREEK	TELEGRAPH RD	OCEAN AVE	15.16	Gateway Cities	Santa Fe Springs, Unincorporated
COYOTE CREEK EAST	IMPERIAL HWY	ARTESIA BLVD	4.37	Gateway Cities	La Mirada, Unincorporated
CRENSHAW-ARDEN	HIGHLAND AVE	PCH	22.74	Central Los Angeles, South Bay Cities	Gardena, Hawthorne, Inglewood, Los Angeles, Torrance, Unincorporated
CULVER-JEFFERSON	S SEPULVEDA BLVD	COAST	4.50	Westside Cities	Culver City, Los Angeles
CULVER-ROBERTSON	SANTA MONICA BLVD	LINCOLN BLVD	8.82	Central Los Angeles, Westside Cities	Beverly Hills, Culver City, Los Angeles, West Hollywood

Corridor	From	To	Total Miles	Subregion	Jurisdiction
Del Amo Blvd	COAST	COYOTE CREEK	19.44	Gateway Cities, South Bay Cities	Carson, Cerritos, Lakewood, Long Beach, Los Angeles, Redondo Beach, Torrance, Unincorporated
DOMINGUEZ CHANNEL	S VERMONT AVE	PCH	7.14	South Bay Cities	Carson, Los Angeles
DUARTE-EL MONTE	W HUNTINGTON DR	RIO HONDO	3.35	San Gabriel Valley	Arcadia, El Monte, Temple City
EATON WASH	NEW YORK DR	RIO HONDO	8.28	Arroyo Verdugo	El Monte, Pasadena, Temple City, Unincorporated
EL SEGUNDO BLVD	COAST	ALAMEDA ST	11.97	Gateway Cities, South Bay Cities, Westside Cities	Compton, El Segundo, Hawthorne, Los Angeles, Unincorporated
FAIRFAX	HOLLYWOOD BLVD	BALLONA CREEK	4.46	Central Los Angeles, Westside Cities	Los Angeles, West Hollywood
FAIRPLEX-RIDGEWAY	BONITA AVE	SAN JOSE WASH	3.78	San Gabriel Valley	La Verne, Pomona
FIRESTONE-MANCHESTER	CULVER BLVD	LA RIVER	16.41	Central Los Angeles, Gateway Cities, South Bay Cities, Westside Cities	Inglewood, Los Angeles, South Gate, Unincorporated
FIRESTONE-SPRR	LA RIVER	ARTESIA BLVD	12.27	Gateway Cities	Downey, La Mirada, Norwalk, Santa Fe Springs, South Gate
FLORENCE AVE	BNSF RAILROAD	ALAMEDA ST	5.92	Central Los Angeles, Gateway Cities, South Bay Cities	Inglewood, Los Angeles, Unincorporated
FOOTHILL-SUNLAND-VINELAND	VENTURA BLVD	VERDUGO WASH	18.39	Arroyo Verdugo, San Fernando Valley	Glendale, La Canada Flintridge, Los Angeles, Unincorporated
FREMONT-PASADENA	E UNION ST	WHITTIER BLVD	9.28	Arroyo Verdugo, Central Los Angeles	Alhambra, Monterey Park, Pasadena, South Pasadena, Unincorporated
GARVEY-RAMONA	WHITTIER BLVD	SP RR	12.04	Central Los Angeles, San Gabriel Valley	Alhambra, El Monte, Monterey Park, Rosemead, South El Monte, Unincorporated
GLENDORA-GRAND	LITTLE DALTON WASH	SP RR	8.80	San Gabriel Valley	Covina, Glendora, Industry, Unincorporated, Walnut, West Covina
GLENOAKS BLVD	FOOTHILL FWY	VERDUGO WASH	17.09	Arroyo Verdugo, San Fernando Valley	Burbank, Glendale, Los Angeles, San Fernando
GOLDEN VALLEY	THE OLD ROAD	SIERRA HWY	9.25	North Los Angeles County	Santa Clarita, Unincorporated
HIGH DESERT CORRIDOR	ELIZABETH LAKE RD	SAN BERNARDINO COUNTY	31.22	North Los Angeles County	Palmdale, Unincorporated
HILLCREST-HAWTHORNE	SLAUSON BLVD	PALOS VERDES DR	15.95	Central Los Angeles, South Bay Cities	Hawthorne, Inglewood, Lawndale, Los Angeles, Rolling Hills Estates, Torrance, Unincorporated
HUBBARD-RINALDI	INDEPENDENCE AVE, LASSEN ST	PACOIMA WASH	13.71	San Fernando Valley	Los Angeles, San Fernando
HUNTINGTON-MAIN	E HUNTINGTON DR	E IMPERIAL HWY	23.42	Arroyo Verdugo, Central Los Angeles	Arcadia, Los Angeles, San Marino, South Pasadena
IMPERIAL HWY	COAST	ORANGE COUNTY LINE	27.19	Central Los Angeles, Gateway Cities, LAX, South Bay Cities, Westside Cities	Downey, Hawthorne, Inglewood, La Mirada, Los Angeles, Lynwood, Norwalk, South Gate, Unincorporated
JEFFERSON-WESTWOOD	LE CONTE AVE	S FIGUEROA ST	10.99	Central Los Angeles, Westside Cities	Culver City, Los Angeles
LA MIRADA CREEK	ORANGE COUNTY LINE	COYOTE CREEK	4.89	Gateway Cities	La Mirada, Santa Fe Springs, Unincorporated, Whittier
LA RIVER	CANOGA AVE	COYOTE CREEK	57.31	Central Los Angeles, Gateway Cities, San Fernando Valley	Bell, Compton, Cudahy, Long Beach, Los Angeles, Paramount, South Gate, Unincorporated, Vernon
LAKELAND-ROSEMEAD	E ORANGE GROVE BLVD	PCH	27.08	Arroyo Verdugo, Gateway Cities, Los Beach Municipal Airport	Bellflower, Downey, Lakewood, Long Beach, Pasadena, Pico Rivera, Rosemead, South El Monte, Temple City, Unincorporated
LANCASTER-SANTA CLARITA-SFV	AVE H	SP RR BURBANK	61.09	Arroyo Verdugo, North Los Angeles, County, San Fernando Valley	Burbank, Lancaster, Los Angeles, Palmdale, San Fernando, Santa Clarita, Unincorporated
LINCOLN BLVD	SAN VICENTE BLVD	W MANCHESTER AVE	7.22	Westside Cities	Los Angeles, Santa Monica
LITTLE DALTON WASH	LITTLE DALTON WASH	E ALOSTA AVE	4.07	San Gabriel Valley	Azusa, Glendora
LOS ANGELES-LOWER AZUSA	ROSEMEAD BLVD	BIG DALTON WASH	7.60	San Gabriel Valley	Baldwin Park, El Monte, Irwindale, Rosemead, Temple City, Unincorporated
MAIN ST	HUNTINGTON DR N	ARROW HWY	12.30	Central Los Angeles, San Gabriel Valley	Alhambra, Arcadia, Irwindale, Los Angeles, San Gabriel, Temple City, Unincorporated
MALIBU CANYON	MUREAU RD	PCH	9.82	Las Virgenes/Malibu	Calabasas, Malibu, Unincorporated
MANHATTAN BEACH BLVD	COAST	CRENSHAW BLVD	4.95	South Bay Cities	Lawndale, Manhattan Beach, Redondo Beach, Unincorporated
MELROSE AVE	SANTA MONICA BLVD	W SUNSET BLVD	7.10	Central Los Angeles, Westside Cities	Los Angeles, West Hollywood
MISSION-SPRR-UPRR	SAN GABRIEL RIVER	SAN ANTONIO WASH	20.21	San Gabriel Valley	Industry, Pomona, Unincorporated
MISSION-VALLEY	E CESAR E CHAVEZ AVE	LA PUENTE CREEK	16.80	Central Los Angeles, San Gabriel Valley	Alhambra, El Monte, Industry, Los Angeles, Rosemead, San Gabriel, Unincorporated
MONTANA AVE	OCEAN AVE	SIN VICENTE BLVD	3.15	Westside Cities	Los Angeles, Santa Monica
MOTOR-SPRR-COLORADO	OCEAN AVE	VENICE BLVD	6.31	Westside Cities	Los Angeles, Santa Monica
OCEAN-MAIN-VENICE	SAN VICENTE BLVD	BALLONA CREEK	6.73	Westside Cities	Los Angeles, Santa Monica, Unincorporated
PACOIMA WASH/CHANNEL	GAVINA AVE	LA RIVER	14.65	San Fernando Valley	Los Angeles, San Fernando
PALOS VERDES DRIVE	PALOS VERDES BLVD	S FIGUEROA ST	7.79	South Bay Cities	Lomita, Los Angeles, Palos Verdes Estates, Rolling Hills Estates
PASADENA-YORK	OAK GROVE	EAGLE ROCK BLVD	11.70	Arroyo Verdugo, Central Los Angeles	La Canada Flintridge, Los Angeles, Pasadena, South Pasadena, Unincorporated
PCH	ESPLANADE	SAN GABRIEL RIVER	18.52	Gateway Cities, South Bay Cities	Lomita, Long Beach, Los Angeles, Redondo Beach, Torrance

Corridor	From	To	Total Miles	Subregion	Jurisdiction
PECK RD	HUNTINGTON DR	WHITTIER BLVD	11.73	Gateway Cities, San Gabriel Valley	Arcadia, El Monte, Industry, Irwindale, Monrovia, South El Monte, Unincorporated
PICO-GATEWAY-OCEAN PARK	BARNARD WAY	CENTRAL AVE	15.58	Central Los Angeles, Westside Cities	Los Angeles, Santa Monica
PLUMMER-VALLEY CIRCLE	VENTURA BLVD	WOODMAN AVE	17.49	San Fernando Valley	Los Angeles, Unincorporated
RANDOLPH AVE RAIL ROW	E SLAUSON AVE	LA RIVER	7.03	Gateway Cities	Bell, Commerce, Huntington Park, Unincorporated
REDONDO BEACH BLVD	FLAGLER LN	SALT LAKE- UP-PE RR ROW	13.74	Gateway Cities, South Bay Cities	Compton, Gardena, Lawndale, Los Angeles, Redondo Beach, Unincorporated
RIO HONDO	PECK RD	LA RIVER	18.65	Gateway Cities, San Gabriel Valley	Arcadia, Bell Gardens, El Monte, Montebello, Pico Rivera, Rosemead, South El Monte, South Gate, Unincorporated
RIVERSIDE-VERDUGO	VAN NUYS BLVD	VAN NUYS BLVD	8.77	Arroyo Verdugo, San Fernando Valley	Burbank, Los Angeles
SALT LAKE- UP-PE RR ROW	LA RIVER	COYOTE CREEK	14.78	Gateway Cities	Artesia, Bell, Bellflower, Cerritos, Cudahy, Downey, Paramount, South Gate, Vernon
SAN FERNANDO	VERDUGO AVE	FIGUEROA ST	8.29	Arroyo Verdugo, Central Los Angeles	Burbank, Glendale, Los Angeles
SAN GABRIEL RIVER	OLD SAN GABRIEL CYN	COYOTE CREEK	33.93	Gateway Cities, San Gabriel Valley	Azusa, Baldwin Park, Cerritos, Downey, Industry, Irwindale, Lakewood, Long Beach, Pico Rivera, Unincorporated
SAN GABRIEL-SIERRA MADRE	EATON WASH	VALLEY BLVD	6.71	Arroyo Verdugo	Pasadena, Rosemead, San Gabriel, San Marino, Unincorporated
SAN JOSE-THOMPSON-LA PUENTE	PUENTE CREEK	SAN ANTONIO DAM	26.46	San Gabriel Valley	Claremont, Industry, La Puente, Pomona, Unincorporated, Walnut
SAN VICENTE BLVD	SANTA MONICA BLVD	VENICE BLVD	4.45	Central Los Angeles, Westside Cities	Beverly Hills, Los Angeles
SANTA CLARA RIVER	VENTURA COUNTY LINE	SIERRA HWY	15.76	North Los Angeles County	Santa Clarita, Unincorporated
SEPULVEDA	RINALDI ST	VENICE BLVD	20.74	San Fernando Valley, Westside Cities	Los Angeles, Unincorporated
SEPULVEDA-PCH	SANTA MONICA BLVD	PALOS VERDES BLVD	17.10	South Bay Cities, Westside Cities	Culver City, El Segundo, Hermosa Beach, Los Angeles, Manhattan Beach, Redondo, Beach
SEPULVEDA-WILLOW	TORRANCE BLVD	COYOTE CREEK	17.81	Gateway Cities, South Bay Cities	Carson, Long Beach, Los Angeles, Redondo Beach, Signal Hill, Torrance, Unincorporated
SLAUSON	SEPULVEDA BLVD	LA RIVER	12.47	Central Los Angeles, Gateway Cities	Huntington Park, Los Angeles, Maywood, Unincorporated, Vernon
SOTO	MISSION ROAD	LA RIVER	5.04	Central Los Angeles, Gateway Cities	Los Angeles, Vernon
SPRR-BURBANK WESTERN	LASSEN ST	LA RIVER	20.03	Arroyo Verdugo, Central Los Angeles, San Fernando Valley	Burbank, Glendale, Los Angeles
SPRR-SAN GABRIEL	FREMONT AVE	EATON WASH	5.32	San Gabriel Valley	Alhambra, San Gabriel, Temple City, Unincorporated
SUNSET AVE	FOOTHILL BLVD	PUENTE CREEK	8.44	San Gabriel Valley	Azusa, Industry, Irwindale, Unincorporated, West Covina
TELEGRAPH RD	GARFIELD AVE	IMPERIAL HWY	8.99	Gateway Cities	Montebello, Pico Rivera, Santa Fe Springs, Unincorporated
THE OLD ROAD	LAKE HUGHES RD	SIERRA HWY	14.43	North Los Angeles County, San Fernando Valley	Los Angeles, Unincorporated
TOWNE AVE	BASE LINE RD	SAN BERNARDINO COUNTY LINE	7.11	San Gabriel Valley	Claremont, Pomona
VENTURA-CALABASAS	VENTURA COUNTY LINE	N CAHUENGA BLVD	30.73	Central Los Angeles, Las Virgenes/Malibu, San Fernando Valley	Agoura Hills, Calabasas, Los Angeles, Unincorporated, Westlake Village
VERMONT	LOS FELIZ BLVD	W ANAHEIM ST	22.82	Central Los Angeles, South Bay Cities	Los Angeles, Unincorporated
WALNUT CREEK	SAN GABRIEL RIVER	FAIRPLEX DR	14.47	San Gabriel Valley	Baldwin Park, Covina, San Dimas, West Covina
WASHINGTON BLVD	WOODBURY RD	WOODLYN RD	5.23	Arroyo Verdugo	Pasadena, Unincorporated
WESTERN AVE	IMPERIAL HWY	W ANAHEIM ST	9.93	South Bay Cities	Gardena, Los Angeles, Torrance, Unincorporated
WHITTIER BLVD	CENTRAL AVE	WASHINGTON BLVD	12.86	Central Los Angeles, Gateway Cities	Los Angeles, Montebello, Pico Rivera, Unincorporated, Whittier
WHITTIER-UPRR-SPRR	SAN GABRIEL RIVER	ORANGE COUNTY LINE	7.80	Gateway Cities	Pico Rivera, Unincorporated, Whittier
WILSHIRE-SAN VICENTE	OCEAN AVE	CENTRAL AVE	20.14	Central Los Angeles, Westside Cities	Beverly Hills, Los Angeles, Santa Monica, Unincorporated
WOODRUFF AVE	FIRESTONE BLVD	E WILLOW ST	8.90	Gateway Cities	Bellflower, Downey, Lakewood, Long Beach

Metro Active Transportation 2% Program -- San Gabriel Valley Corridors & Projects					
Corridor / Project	From	To	Total Miles	Subregion	Jurisdiction
Alhambra Wash	SPRR San Gabriel	Rio Hondo	4.63	San Gabriel Valley	Rosemead, San Gabriel, Unincorporated
Allen Avenue	E. Altadena Drive	Orlando Road	3.99	Arroyo Verdugo, San Gabriel Valley	Los Angeles, Pasadena, San Marino, Unincorporated
Altadena-Long Beach	Loma Alta Dr.	LA River	32.12	Arroyo Verdugo, Central Los Angeles, Gateway Cities, San Gabriel Valley	Alhambra, Bell Gardens, Commerce, Lakewood, Long Beach, Montebello, Monterey Park, Paramount, Pasadena, San Marino, Signal Hill, South Gate, South Pasadena, Unincorporated
Arrow-Bonita	Live Oak Ave.	San Antonio Wash	17.16	San Gabriel Valley	Azusa, Claremont, Covina, Irwindale, La Verne, Pomona, San Dimas, Unincorporated
Arroyo Seco	San Pascual Ave.	Ave. 19	4.85	Arroyo Verdugo, Central Los Angeles, San Gabriel Valley*	Los Angeles, South Pasadena
Arroyo-Verdugo	Van Nuys Blvd.	York Blvd.	23.81	Arroyo Verdugo, Central Los Angeles, San Fernando Valley, San Gabriel Valley*	Glendale, La Canada Flintridge, Los Angeles, Pasadena, South Pasadena
Azusa Ave.	San Gabriel River	Colima Road	12.3	San Gabriel Valley	Azusa, Covina, Industry, Unincorporated, West Covina
Badillo-Ramona	Mission-Valley SPRR	W. Bonita Ave.	13.35	San Gabriel Valley	Baldwin Park, Covina, El Monte, San Dimas, Unincorporated, West Covina
Big Dalton Wash	Big Dalton Debris Dam	Walnut Creek	10.84	San Gabriel Valley	Azusa, Baldwin Park, Covina, Glendora, Irwindale, Unincorporated, West Covina
Chavez-Sunset-Riggin	N. Fairfax Ave.	Alhambra Wash	18.37	Central Los Angeles, Gateway Cities, San Gabriel Valley	Los Angeles, Monterey Park, Rosemead, Unincorporated
Colima Road	Telegraph Road	Orange County Line	15.09	Gateway Cities, San Gabriel Valley	Diamond Bar, Industry, Unincorporated, Whittier
Colorado-Foothill	LA River	San Antonio Wash	34.58	Arroyo Verdugo, Central Los Angeles, San Gabriel Valley	Arcadia, Azusa, Claremont, Duarte, Glendale, Irwindale, La Verne, Los Angeles, Monrovia, Pasadena, Pomona, San Dimas, Unincorporated
Duarte-El Monte	W. Huntington Dr.	Rio Hondo	3.35	San Gabriel Valley	Arcadia, El Monte, Temple City
Eaton Wash	New York Dr.	Rio Hondo	8.28	Arroyo Verdugo, San Gabriel Valley	El Monte, Pasadena, Temple City, Unincorporated
Fairplex-Ridgeway	Bonita Ave.	San Jose Wash	3.78	San Gabriel Valley	La Verne, Pomona
Foothill-Sunland-Vineland	Ventura Blvd.	Verdugo Wash	18.39	Arroyo Verdugo, San Fernando Valley, San Gabriel Valley*	Glendale, La Canada Flintridge, Los Angeles, Unincorporated
Fremont-Pasadena	E. Union Street	Whittier Blvd.	9.28	Arroyo Verdugo, Central Los Angeles, San Gabriel Valley	Alhambra, Monterey Park, Pasadena, South Pasadena, Unincorporated
Garvey-Ramona	Whittier Blvd.	SP RR	12.04	Central Los Angeles, San Gabriel Valley	Alhambra, El Monte, Monterey Park, Rosemead, South El Monte, Unincorporated
Glendora-Grand	Little Dalton Wash	SP RR	8.8	San Gabriel Valley	Covina, Glendora, Industry, Unincorporated, Walnut, West Covina
Huntington-Main	E. Huntington Dr.	E. Imperial Hwy.	23.42	Arroyo Verdugo, Central Los Angeles, San Gabriel Valley	Arcadia, Los Angeles, San Marino, South Pasadena
Lakewood-Rosemead	E. Orange Grove Blvd.	PCH	27.08	Arroyo Verdugo, Gateway Cities, Long Beach Municipal Airport, San Gabriel Valley	Bellflower, Downey, Lakewood, Long Beach, Pasadena, Pico Rivera, Rosemead, South El Monte, Temple City, Unincorporated
Little Dalton Wash	Little Dalton Wash	E. Alosta Ave.	4.07	San Gabriel Valley	Azusa, Glendora
Los Angeles-Lower Azusa	Rosemead Blvd.	Big Dalton Wash	7.6	San Gabriel Valley	Baldwin Park, El Monte, Irwindale, Rosemead, Temple City, Unincorporated
Main St.	Huntington Dr. N.	Arrow Hwy.	12.3	Central Los Angeles, San Gabriel Valley	Alhambra, Arcadia, Irwindale, Los Angeles, San Gabriel, Temple City, Unincorporated
Mission-SPRR-UPRR	San Gabriel River	San Antonio Wash	20.21	San Gabriel Valley	Industry, Pomona, Unincorporated
Mission-Valley	E. Cesar E. Chavez Ave.	La Puente Creek	16.8	Central Los Angeles, San Gabriel Valley	Alhambra, El Monte, Industry, Los Angeles, Rosemead, San Gabriel, Unincorporated
Pasadena-York	Oak Grove	Eagle Rock Blvd.	11.7	Arroyo Verdugo, Central Los Angeles, San Gabriel Valley*	La Canada Flintridge, Los Angeles, Pasadena, South Pasadena, Unincorporated
Peck Road	Huntington Dr.	Whittier Blvd.	11.73	Gateway Cities, San Gabriel Valley	Arcadia, El Monte, Industry, Irwindale, Monrovia, South El Monte, Unincorporated
Rio Hondo	Peck Rd.	LA River	18.65	Gateway Cities, San Gabriel Valley	Arcadia, Bell Gardens, El Monte, Montebello, Pico Rivera, Rosemead, South El Monte, South Gate, Unincorporated

San Gabriel River	Old San Gabriel Cyn.	Coyote Creek	33.93	Gateway Cities, San Gabriel Valley	Azusa, Baldwin Park, Cerritos, Downey, Industry, Irwindale, Lakewood, Long Beach, Pico Rivera, Unincorporated
San Gabriel-Seirra Madre	Eaton Wash	Valley Blvd.	6.71	Arroyo Verdugo, San Gabriel Valley	Pasadena, Rosemead, San Gabriel, San Marino, Unincorporated
San Jose-Thompson-La Puente	Puente Creek	San Antonio Dam	26.46	San Gabriel Valley	Claremont, Industry, La Puente, Pomona, Unincorporated, Walnut
SPRR-San Gabriel	Fremont Ave.	Eaton Wash	5.32	San Gabriel Valley	Alhambra, San Gabriel, Temple City, Unincorporated
Sunset Avenue	Foothill Blvd.	Puente Creek	8.44	San Gabriel Valley	Azusa, Industry, Irwindale, Unincorporated, West Covina
Telegraph Road	Garfield Avenue	Imperial Hwy.	8.99	Gateway Cities, San Gabriel Valley	Montebello, Pico Rivera, Santa Fe Springs, Unincorporated
Towne Ave.	Base Line Road	San Bernardino County Line	7.11	San Gabriel Valley	Claremont, Pomona
Walnut Creek	San Gabriel River	Fairplex Dr.	14.47	San Gabriel Valley	Baldwin Park, Covina, San Dimas, West Covina
Washington Blvd.	Woodbury Road	Woodlyn Road	5.23	Arroyo Verdugo, San Gabriel Valley*	Pasadena, Unincorporated
Whittier Blvd.	Central Ave.	Washington Blvd.	12.86	Central Los Angeles, Gateway Cities, San Gabriel Valley	Los Angeles, Montebello, Pico Rivera, Unincorporated, Whittier

Metro Active Transportation Strategic Plan		
First/Last Mile Priority Network		
San Gabriel Valley Projects		
Corridor Name	Jurisdiction	Route Type
Altantic / Cesar E. Chavez	Monterey Park	Bus
Azusa / Alameda	Azusa	LRT
Azusa / Citrus	Glendora	LRT
Baldwin Park	Baldwin Park	Rail
Claremont	Claremont	Rail
Collegian / Cesar E. Chavez	Monterey Park	Bus
Commerce / Montebello	Montebello	Rail
Covina	Covina	Rail
Duarte / Highland	Duarte	LRT
El Monte	El Monte	Rail
El Monte Busway	El Monte	Bus (BRT)
Industry	Indsutry	Rail
Myrtle / Duarte	Monrovia	LRT
Pomona - Downtown	Pomona	Rail
Pomona - North	Pomona	Rail
Santa Clara / 1st	Arcadia	LRT
South Pasadena*	South Pasadena	LRT



Next stop: access to opportunity.

Metro Active Transportation (MAT) Program
PAC Working Group
April 2, 2019



Overview

1. Background & Context
 - Funding
 - Policy Pillars
 - Metro Vision & Goal
 - Opportunities
2. Program Overview
 - Administrative Procedures
 - Program Overview
 - Funding Categories
 - Cycle 1 Vision & Approach
3. Discussion Points & Next Steps





Background & Context

Active Transportation Funding

Measure M established a 2% Active Transportation Fund

\$857M

\$365M

\$1.16B

= \$2.4B

Metro Active Transport (MAT) Program

- Multi-year, competitive program
- Guided by PAC
- Regular cashflow (\$75M thru FY25)

LA River Path

- Guaranteed funding
- Major expenditures in FY22-FY27

Unallocated Balance

- Metro discretion
- Expenditure priorities and process TBD

Policy Pillars

Board has established prioritization and investment framework

Active Transportation Strategic Plan

- Framework for strategic investments in infrastructure and programs
- Two core components:
 1. FLM Priority Network
 2. Regional Active Transportation Corridors

FLM Board Directive (Motion 14.1)

- Deliver FLM as part of future Transit Corridors
- Defines priority network
- Directs and prioritizes funding

Equity Platform

- Acknowledges regional inequities
- Targets greatest need areas
- Focus and deliver



5

Metro's Guiding Goals & Policies

Vision 2028

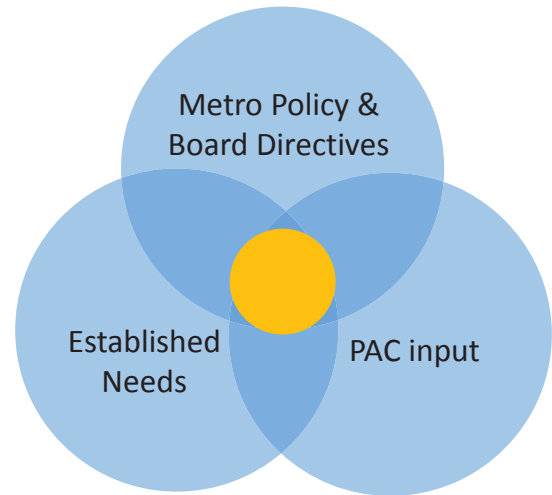
- GOAL 1** Provide high-quality mobility options that enable people to spend less time traveling
- GOAL 2** Deliver outstanding trip experiences for all users of the transportation system
- GOAL 3** Enhance communities and lives through mobility and access to opportunity
- GOAL 4** Transform LA County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



The Opportunity

How do we best align available resources with policy priorities?

- Focus on areas of need
- Execute Board-adopted policy
- Reinforce Metro strategic priorities
- Respond to PAC input
- Provide leadership to jump-start action
- Forge strategic partnerships to catalyze implementation



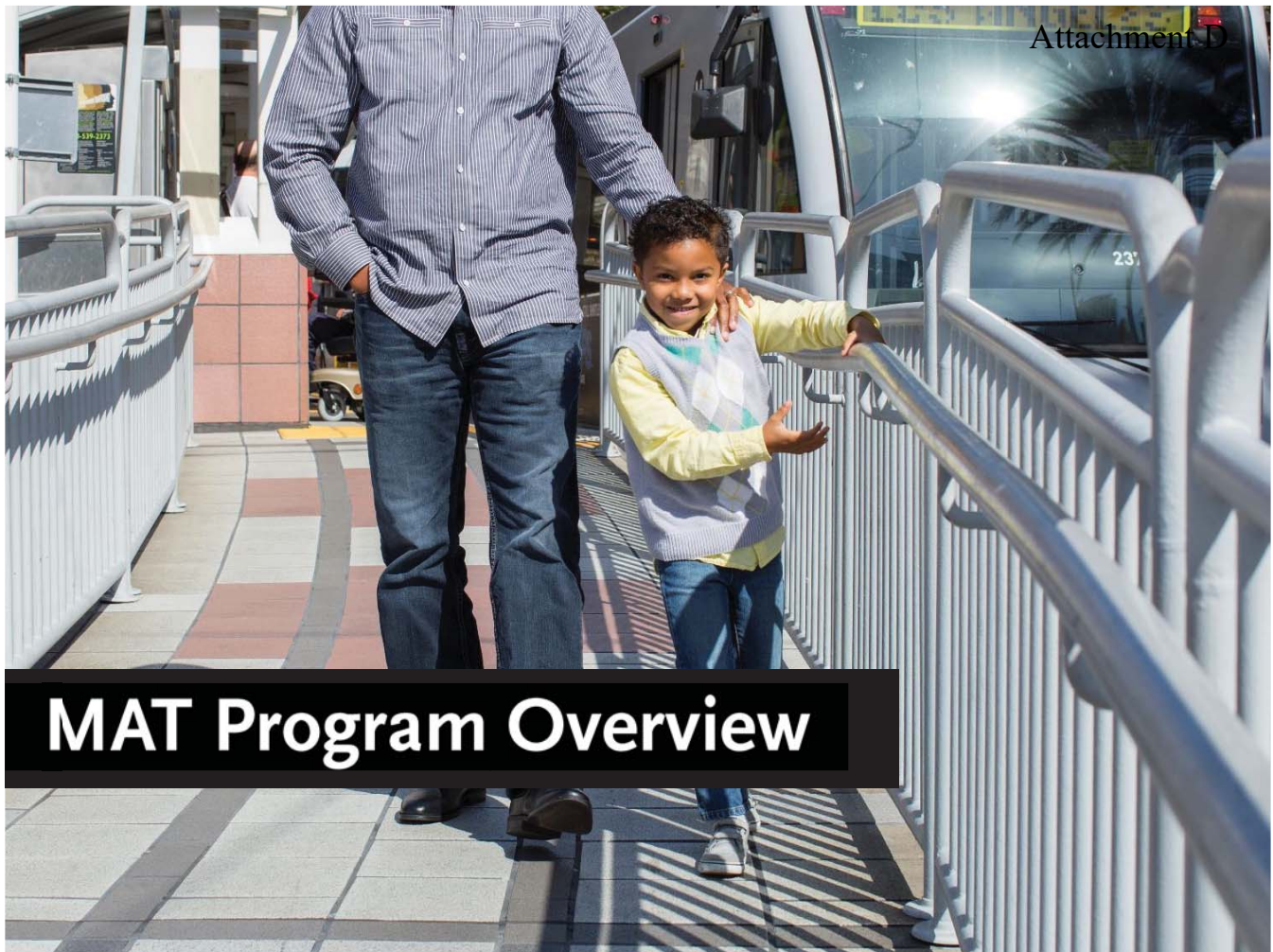
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Capture the Hearts and Minds



Maximize customer touchpoints
Tackle needs in short- and long-term





MAT Program Overview

MAT Program Overview

Admin Procedures create structure:

- Eligible Activities
 1. FLM Priority Network
 2. Regional Active Transportation Corridors
- Eligible Phases: ALL (Planning* through Construction)
 - *Planning limited to 0.5% of total costs
- General Cycle Timing
- Program Administration/Steps



Program Cycles

- **Length:** 2-5 years with cashflow commitment
- **Focus:** Tailored to priorities of time period to maximize value
- **Other Elements:**
 - Solicitation requirements/process
 - Schedule
 - Public participation
 - Performance metrics/evaluation



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Cycle 1 Strategy

STRUCTURE

- 3-5 years
- \$45-\$75m (\$15m/year)
- Focus on
 1. FLM Priority Networks
 2. Regional Active Transportation Corridors

GOALS

- Target critical needs
- Show results
- Work with the willing
- Promote partnerships/Establish commitments
 - Streamline implementation
 - Own and maintain improvements
- Inform future work

FLM PRIORITY NETWORK



REGIONAL AT CORRIDORS



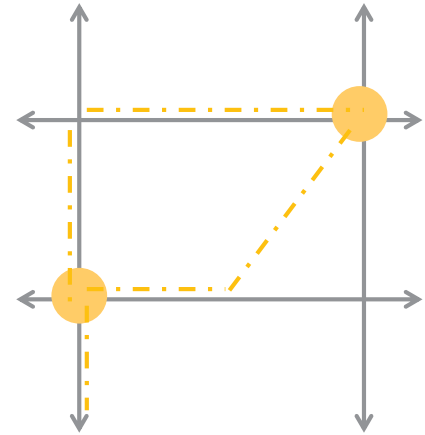
First/Last Mile Priority Network

OBJECTIVES:

- Address existing stations and stops identified by Board Motion
- Deploy rapidly in a concentrated radius (1-2 blocks)
- Fund design through implementation
- Test FLM Toolkit
- Pilot streamlined approval process

BENEFITS

- Highly visible
- Target high need areas
- Lower cost (more locations)



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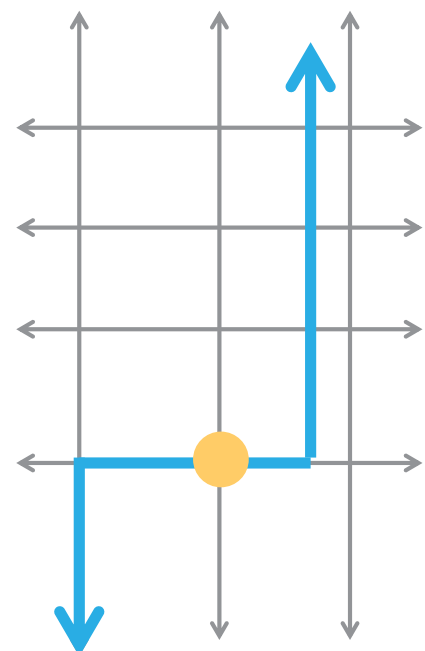
Regional Active Transportation Corridors

OBJECTIVES:

- Move ATSP vision into action
- Create multi-jurisdiction corridors
- Establish lasting partnerships
- Build upon recent experience
- Create pipeline for strategic investment

BENEFITS

- Supports regional network
- Targets high need areas
- Moves complex projects forward
- Creates partnership across region



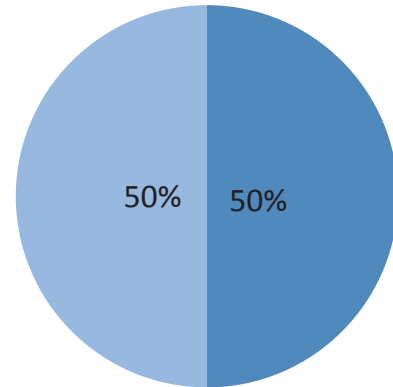
Proposed Funding

FLM Priority Network

- Up to 10 projects
- \$2-5m each
- Inception thru construction

Regional AT Corridors

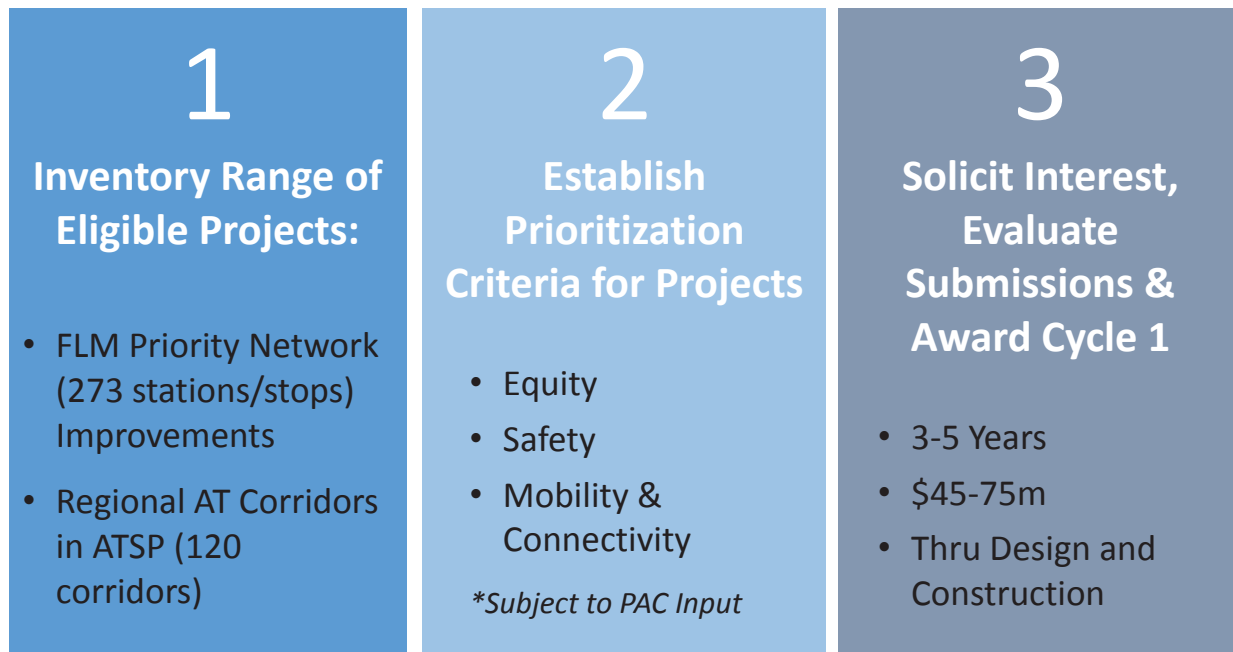
- Up to 5 projects
- \$7-8m each
- Inception thru construction (early action improvements)



■ FLM Network
■ Regional AT Corridors



Proposed Selection Process



Prioritization Criteria - Categories and Sources

Category	Data Inputs	Applicability	
		FLM	Corridors
Equity	Disadvantaged Communities (DAC) - CalEnviroScreen	x	x
	California Healthy Places Index	x	x
	SCAG's Communities of Concern	x	x
Safety	TIMS/ SWITRS	x	x
	SCAG's High Injury Network		x
	City of LA's 's High Injury Network		x
Mobility & Connectivity	Metro & Municipal Transit Agencies' Daily Boardings	x	
	First/Last Mile Connectivity to Major Transit Stops		x
	SCAG's Regional Bikeway Network		x
	Measure M Transit/Rail Project Alignments		x



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Solicitation Process Details

- Letter of interest requested from highly ranked project locations
- Factors to consider beyond interest:
 - Local support/buy-in
 - Coalition/partnership
 - Process commitments
 - Leverage
- Other steps required for:
 - Award
 - Funding agreement



Program Development – Other Considerations

- Metro role in projects
- Scope/budget development and refinement
- Program evaluation/metrics
- Jurisdiction limits
- Other PAC input, input from jurisdictions
- Detailed schedule (handout)



Discussion Topics

- Overall program concept
- Administrative procedures
- Project size and number
- Solicitation process
- Project ranking categories (relative emphasis)
 - Safety
 - Equity
 - Mobility & Connectivity
- Other?



Next Steps

- Review, comment on Admin Procedures
- Develop detailed Cycle 1 package – June PAC meeting
- Board action on (release Cycle 1) – Summer 2019
- Detailed schedule (handout)