State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

MEMORANDUM

To: CHAIR AND COMMISSIONERS
CALIFORNIA TRANSPORTATION COMMISSION

CTC Meeting: December 8-9, 2021

From: STEVEN KECK, Chief Financial Officer

Reference Number: 4.33, Action Item

Prepared By: Kyle Gradinger, Chief
Division of Rail and Mass Transportation

Subject: **SENATE BILL 1 LOCAL PARTNERSHIP PROGRAM (COMPETITIVE) - PROJECT SCOPE AMENDMENT FOR THE METRO ORANGE LINE BUS RAPID TRANSIT IMPROVEMENT PROJECT**
RESOLUTION LPP-P-2122-12
AMENDING RESOLUTION LPP-P-2021-09

ISSUE:

Should the California Transportation Commission (Commission) approve the Los Angeles County Metropolitan Transportation Authority's (LA Metro) second request to amend the Metro Orange Line Bus Rapid Transit Improvement project (PPNO 5504) scope, programmed in the 2018 Local Partnership Program Competitive (LPP-C) under Cycle 1, and previously amended under resolution LPP-P-2021-09?

RECOMMENDATION:

The California Department of Transportation (Department) recommends the Commission approve the LA Metro's second request to amend the Metro Orange Line Bus Rapid Transit Improvement project (PPNO 5504) scope, programmed in the 2018 LPP-C under Cycle 1, and previously amended under resolution LPP-P-2021-09.

BACKGROUND:

The LA Metro received $75 million in Senate Bill 1 LPP-C funds for the construction (CON) phase of the Metro Orange Line Bus Rapid Transit Improvement Project, now renamed to the Metro G Line Bus Rapid Transit Improvement Project. The project was programmed for allocation in Fiscal Year 2019-20, at the May 2018 Commission meeting.

Under the originally approved scope the CON phase consisted of a dedicated bus single aerial grade separation spanning over five intersections, construction of four-quadrant gate systems at 34 intersections along an 18-mile segment and elevation of an existing bike path between Van Nuys and Sepulveda Boulevards to be adjacent to the aerial grade separation, basic improvements to the existing at-grade Class I bicycle pathway, and closure of Tyrone Avenue to accommodate the busway grade separation. On December 5, 2019, the Commission approved LA Metro's scope change request to replace construction of the single aerial grade separation with construction of two separate aerial structures spanning over four intersections adding one four-quadrant gate crossing in between the two aerial structures for a total of 35 four-quadrant gate systems.

Under this new scope change LA Metro proposes to remove the elevated bike path adjacent to the bus line's aerial grade separation between Van Nuys and Sepulveda Boulevards and instead complete enhanced improvements to the existing at-grade bicycle and pedestrian pathway along 14 miles from Chatsworth to Valley College Stations. In addition, Tyrone Avenue will not be closed because it is not required to accommodate the aerial grade separation. All other components of this project remain unchanged. The LA Metro has stated they will award one contract using the Progressive Design Build delivery method.

After thorough review and analysis of this latest scope change request, the Department has determined that although the project design will change, additional benefits will be achieved, with no negative impacts to the overall project budget or schedule. Therefore, the Department recommends Commission approval of the scope change.

Attachments: Department Analysis and Recommendations

Project Scope Change Amendment Request
Caltrans' Analysis and Recommendations

October 2021

PROJECT NAME: Metro Orange Line (G Line) Bus Rapid Transit Improvement Project
IMPLEMENTING AGENCY: Los Angeles County Metropolitan Transportation Authority
PPNO: 5504
DATE OF AGENCY REQUEST FOR SCOPE CHANGE: October 25, 2021 (for December 2021 CTC Meeting)

APPROVED PROJECT SCOPE:
The Los Angeles County Metropolitan Transportation Authority (LA Metro) was awarded $75 million in Senate Bill 1, Local Partnership Program (LPP) funds for construction phase of the Metro Orange Line Bus Rapid Transit, now renamed to the G Line. The project was programmed for allocation in fiscal year 2019/2020, at the May 2018, California Transportation Commission (CTC) Meeting.

The original approved scope was for construction of a dedicated bus single aerial grade separation spanning over five intersections, construction of four-quadrant gate systems at 34 intersections along an 18-mile segment and elevate an existing bike path between Van Nuys and Sepulveda Boulevards to be adjacent to the aerial grade separation, basic improvements to the existing at-grade Class I bicycle pathway, and closure of Tyrone Avenue to accommodate the busway grade separation.

On December 5, 2019, the CTC approved LA Metro's scope change request to replace construction of the single aerial grade separation with construction of two separate aerial structures spanning over four intersections adding 1 four-quadrant gate crossing in between the two aerial structures for a total of 35 four-quadrant gate systems.

NEW PROJECT SCOPE:
The LA Metro's proposed scope change is to remove the elevated bike path adjacent to the bus line's aerial grade separation between Van Nuys and Sepulveda Boulevards and instead complete enhanced improvements to the existing at-grade bicycle and pedestrian pathway along 14 miles from Chatsworth to Valley College Stations. In addition, Tyrone Avenue will not be closed because it is not required to accommodate the aerial grade separation. All other components of this project remain unchanged.

Attachment A lists in detail the enhanced improvements that will be made to the existing multi-use path, as well as provides the analytical data to support the proposed scope change benefits.

Purpose
This document serves as supplemental information to the scope change request completed by LA Metro and submitted to Caltrans on October 25, 2021.

Caltrans' Recommendation
Caltrans reviewed the LA Metro Scope Change Request documentation and Caltrans recommends the following action:
APPROVE SCOPE CHANGE

Scope Change:
Remove the elevated bike path adjacent to the bus line's aerial grade separation between Van Nuys and Sepulveda Boulevards, complete enhanced at-grade bicycle, and pedestrian improvements along 14-miles of existing multiuse path, remove the closure of Tyrone Avenue.

Reason for the Scope Change
The proposed scope change is a result of the analysis to address findings from first/last mile planning for the Van Nuys and Sepulveda stations, and stakeholder concerns. The LA Metro analyzed, in detail, improvements to the bicycle/pedestrian pathways prior to requesting the scope change. The analysis indicated that the change resulted in a significant increase in benefits such as improved safety – by reducing bicycle collisions, addressing the first/last mile plan, accessible connections for bicyclists/pedestrians to more destinations, and served the disadvantaged communities along the entire Metro G Line. The proposed change will make the path more convenient and comfortable which may encourage more users, resulting in increased active transportation, that could reduce pollution and emissions.

Attachment A lists in detail the enhanced improvements that will be made to the existing multi-use path, as well as provides the analytical data to support the proposed scope change benefits.

Summary of Caltrans Analysis
Caltrans supports this request because it improves the viability of active transportation, addresses safety concerns for bicyclists and pedestrians, increases accessibility and connectivity, models efficient land use, and ensures cost effectiveness. Based on the analysis provided by LA Metro in Attachment A, the change in scope helps serve double the number of residents identified in the previous scope, within disadvantaged communities by constructing a package of at-grade improvements along the existing bike paths. This project is fully funded and meets the LPP Guidelines

Summary of Scope Changes

Original Scope	Existing Scope	Proposed Changes
• Construct one aerial grade-separated structure for buses over five intersections with adjacent Class I bicycle path spanning Van Nuys to Sepulveda Boulevards • Install railroad-type, four-quadrant gate systems at 34 intersections along the MOL route • Improve existing at-grade Class I bicycle path adjacent to the span of the busway grade separation structure to improve safety for bicyclists and pedestrians • Closure of Tyrone Avenue to accommodate the busway grade separation structure	• Construct two aerial grade-separated structures over five intersections with adjacent Class I bicycle path spanning Van Nuys to Sepulveda Boulevards • Install railroad-type, four-quadrant gate systems at 35 intersections along the MOL route • Improve existing at-grade Class I bicycle path adjacent to the span of the busway grade separation structure to improve safety for bicyclists and pedestrians • Closure of Tyrone Avenue to accommodate the busway grade separation structure	• Construct two aerial grade-separated structure over five intersections • Install railroad-type, four-quadrant gate systems at 35 intersections along the MOL route • Improve existing at-grade Class I bicycle path over 14 miles along the MOL to improve safety for bicyclists and pedestrians • Removed from scope closure of Tyrone Avenue, not needed to accommodate the busway grade separation structure

Additional Comments

LA Metro has coordinated with Caltrans staff to provide the most accurate information possible. Caltrans concurs with the information provided.

Caltrans' Coordination with Requesting Agency

Caltrans Division of Rail and Mass Transportation and District 7 staff corresponded and guided LA Metro through several discussions on the scope change and the necessary documentation to be submitted, between June 2021 and October 2021.

Impact to Project Cost

The proposed scope change does not negatively impact the project budget.

Impact to Project Schedule

The proposed scope change has no impact to the project schedule.

ATTACHMENTS

1. Request letter from LA Metro
2. Project Programming Request Form
3. Request for Project Scope Change Form
4. Attachment A Metro G Line Scope Change Data Analysis
5. Local Partnership Program Benefits Form
6. Support letter from District 7
7. Previously approved scope change request

Los Angeles County
Metropolitan Transportation Authority

One Gateway Plaza
Los Angeles, CA 90012-2952

213.922.2000 Tel
metro.net

Metro

October 25, 2021

Mr. Mitch Weiss
Executive Director
California Transportation Commission
1120 "N" Street, Suite 2221
Sacramento, CA 95814

Attention: Carlo Ramirez, Arthur Murray

PROPOSED PROJECT SCOPE & SCHEDULE MODIFICATION FOR METRO ORANGE LINE (G) BUS RAPID TRANSIT IMPROVEMENTS PROJECT
Local Partnership Program, Competitive Program Funding

Dear Mr. Weiss:

The Los Angeles County Metropolitan Transportation Authority (Metro) hereby submits its request for approval of the second scope modification for the Metro Orange Line (MOL), which is now being referred to as Metro G Line, Bus Rapid Transit (BRT) Improvements project. The project was awarded a $75,000,000 2018 Local Partnership Program – Competitive (LPP-C) grant award.

Due to the inconsistency in Metro's transit line naming convention and continuous growth of the system, it was decided, in 2018, to change the naming convention to a color and letter designation for rail lines and bus rapid transit lines, including MOL. To avoid confusion with the backup documentation, we are now referring to the MOL as "Metro G Line."

Proposed Scope Modification

The current approved project scope consisted of constructing improvements along the 18-mile Metro G Line Busway. It included construction of aerial grade separated structures that elevate the busway, associated BRT stations and bike path at Van Nuys & Sepulveda Blvds and railroad-type gating at 35 at-grade crossings along the entire 18-mile Metro G Line. However, after additional analysis, findings from first/last mile planning for the Van Nuys and Sepulveda stations, and stakeholder concerns received through those processes, we are proposing to eliminate the two grade-separated bicycle/pedestrian overcrossing bridges at the Van Nuys and Sepulveda Stations, and instead construct at-grade bicycle and pedestrian improvements along 14 miles of existing multiuse path from Chatsworth to Valley College Stations. This will address the first/last mile plan, accessibility, connectivity, and safety deficiencies of the existing scope.

There were 2 tiers of improvements that were analyzed in detail for the scope modification. Tier I improvements will be constructed from Sepulveda to Van Nuys Stations for a total length of 1.2 miles while the Tier 2 proposal constructs

improvements along the 14 miles of the existing bike path from Chatsworth to Valley College Stations in addition to the Tier 1 improvements. Tier 2 was chosen because it will provide a higher safety benefit, and direct and accessible connections for pedestrians/bicyclists to more destinations and serves the disadvantaged communities along the entire Metro G Line.

In terms of cost and schedule, the proposed change will not result in changes to the overall project cost or LPP funding request as currently programmed. Attachment A (Metro G Line Scope Change) summarizes the existing and proposed scope elements related to the bicycle/pedestrian elements of the project (Table 1) and detailed reasons for the scope change and Attachment B presents the Metro Board approval for the scope modification.

Benefit/Cost Analysis Comparison

Metro staff prepared a comprehensive updated Benefit/Cost Analysis (BCA) using the Caltrans B/C Active Transportation Model version 7.2 analysis to compare the original scope (aerial grade separated bike path) and proposed scope amendment (at-grade pedestrian/bicycle improvements). After conducting BCA to calculate and monetize the benefits and costs associated with the existing scope and proposed scope amendment, Metro determined that the proposed scope (Tier 2 Improvements) presented a significant increase in benefits over the existing scope (Attachment A – Table 2 & 3). The proposed scope results in a benefit cost ratio of 3.2, with net monetized benefits totaling $24.4 million. This is nearly three times higher than the net benefits provided by the existing scope. The proposed scope provides greater benefits mainly in the areas of safety and health. In addition, the proposed change will make the path more convenient and comfortable to use which will encourage more users. This will yield health benefits through increased active transportation and reduced automobile use and related pollution and emissions.

Schedule

We are enclosing the revised project programming requests (PPRs) to update the project scope of work, outputs/outcomes and milestone schedule. The schedule revisions are due to the change in the project delivery method of the main construction contract. Upon completion of a project delivery evaluation process, Metro determined a Progressive Design Build (PDB) delivery method is appropriate for the project. PDB works best on projects with sequence and schedule sensitivities, and where design is complex, difficult to define, and/or subject to change. Those criteria exist on this project due to the interfaces with other transit projects (East San Fernando Valley and Sepulveda Transit Corridor Projects) that are currently in the planning stages (and therefore are subject to design and schedule changes), unproven technology elements related to the crossing gates, and necessary interfaces with third party stakeholders. Utilizing the PDB delivery method will provide for the efficient management of risks, the selection of a qualified contractor to deliver a complex project, and the optimization of interface management between internal Metro departments, other projects, and third-party stakeholders. Metro Board approved this new project delivery method at the March 2021 Board meeting (Attachment C presents the March 2021 Board Report). Metro is actively developing

the contract and solicitation package targeting for Winter 2022 release. Significant utility relocations have been completed at Sepulveda and Van Nuys to accommodate the new grade separations.

Budget

The proposed scope change is not anticipated to impact the overall project budget. A preliminary rough order of magnitude (ROM) estimate of total project cost, conducted during the preliminary engineering phase, indicates a forecasted range of total project cost between $393 and $476 million. However, the elimination of the bicycle grade separation is estimated to result in a decrease of approximately $20 million, net of the costs for the pedestrian/bicycle improvements (approximately $8.1 million – Attachment A - Table 5.1) off this estimated total. Once the contractor is selected, total project cost will be known with much greater precision. The project's funding plan currently includes $245.3 million in Measure M and $75 million in SB-1 Local Partnership Program (LPP) grant funds. Metro is committed to secure funds for any additional project costs above current programmed revenues.

We are planning to submit the allocation request for approval at the March CTC 2022. Due to the new PDB delivery method and the postponement of the release date of RFP to Winter 2022, we will also request additional time to award the construction contract and complete the project at time of allocation to ensure the project meets LPP guidelines.

To assist you in reviewing our request, in addition to the attachments noted above, we have also attached revised PPRs (Attachment D) and the Caltrans Request for Scope Change Form (Attachment E). We thank you for considering the modifications to our project scope. If you have any further questions, please contact me at (213) 922-2822 or Nela De Castro at (213) 922-6166.

Sincerely,

Cosette Stark

COSETTE STARK
Deputy Executive Officer
Grants Management and Oversight

Attachments
A - Metro G Line Scope Change
B - Board Report – Scope Work Modification
C - Board Report – Progressive D/B Delivery Method
D - PPRs
E - Request for Project Scope Change Form

cc: Christine Gordon
Matthew Yosgott

ATTACHMENT 2

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
ePPR-6065-2021-0010 v0

Amendment (Existing Project) ☒ YES ☐ NO | Date 11/10/2021 20:00:41

Programs ☐ LPP-C ☐ LPP-F ☐ SCCP ☐ TCEP ☐ STIP ☐ Other

District	EA	Project ID	PPNO	Nominating Agency	
07		0719000037	5504	Los Angeles County Metropolitan Transportation Authority	
County	**Route**	**PM Back**	**PM Ahead**	**Co-Nominating Agency**	
Los Angeles					
				MPO	**Element**
				SCAG	Mass Transit (MT)
Project Manager/Contact			**Phone**	**Email Address**	
Brad Owen			213-418-3143	owenb@metro.net	

Project Title

Metro Orange Line (G) Bus Rapid Transit Improvements

Location (Project Limits), Description (Scope of Work)

Amended - In Los Angeles County on the Metro Orange Line (G) between the North Hollywood Station & Chatsworth Station, BRT improvements will be constructed.

The scope includes construction of two aerial grade separated structures that elevate the busway and associated BRT stations at Van Nuys & Sepulveda Blvds. The aerial structure at Van Nuys Blvd. also spans over Vesper Ave. The Project includes installation of railroad-style four-quadrant gate systems at 35 crossings along the Metro Orange Line (G) and at-grade bicycle and pedestrian improvements along 14 miles of existing multiuse path from Chatsworth to Valley College Stations.

Component	Implementing Agency
PA&ED	Los Angeles County Metropolitan Transportation Authority
PS&E	Los Angeles County Metropolitan Transportation Authority
Right of Way	Los Angeles County Metropolitan Transportation Authority
Construction	Los Angeles County Metropolitan Transportation Authority

Legislative Districts

Assembly:	45,46	Senate:	18,27	Congressional:	29,30

Project Milestone		Existing	Proposed
Project Study Report Approved			
Begin Environmental (PA&ED) Phase		06/15/2018	06/15/2018
Circulate Draft Environmental Document	Document Type	07/26/2018	07/26/2018
Draft Project Report			05/21/2019
End Environmental Phase (PA&ED Milestone)		08/27/2018	08/27/2018
Begin Design (PS&E) Phase		11/01/2018	11/01/2018
End Design Phase (Ready to List for Advertisement Milestone)		08/30/2020	03/31/2024
Begin Right of Way Phase		11/01/2018	11/01/2018
End Right of Way Phase (Right of Way Certification Milestone)		06/30/2021	06/30/2024
Begin Construction Phase (Contract Award Milestone)		08/01/2021	08/01/2024
End Construction Phase (Construction Contract Acceptance Milestone)		02/28/2025	12/31/2026
Begin Closeout Phase		03/01/2025	12/31/2026
End Closeout Phase (Closeout Report)		12/31/2025	06/30/2027

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Purpose and Need

The project purpose is to expand transit services, increase transit ridership, improve transit safety, enhance the access and convenience of the traveling public, and provide or facilitate a viable alternative to driving.

Metro Orange Line (G) is now at capacity with riders currently delayed by cross-traffic intrusions into the Metro Orange Line (G) busway, it is needed to improve operating speeds, ridership, capacity, schedule reliability and safety, while benefitting the surrounding community and ensuring cost effectiveness.

NHS Improvements ☐ YES ☒ NO	Roadway Class NA	Reversible Lane Analysis ☐ YES ☒ NO

Inc. Sustainable Communities Strategy Goals ☒ YES ☐ NO Reduce Greenhouse Gas Emissions ☒ YES ☐ NO

Project Outputs

Category	Outputs	Unit	Total
Intercity Rail/Mass Trans	At-Grade crossings eliminated	EA	3
Intercity Rail/Mass Trans	Grade separations/rail crossing improvements	EA	2
Operational Improvement	Intersection / Signal improvements	EA	35
Active Transportation	Bicycle lane-miles	Miles	14

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PROJECT PROGRAMMING REQUEST (PPR)

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Additional Information

Emissions Reduction Savings from Caltrans Life-Cycle Benefit-Cost Analysis (Cal-B/C) Model v6.2 for the grade separation and gate project components and the Cal -B/C Analysis Active Transportation Model version 7.2 for the bicycle and pedestrian improvements (Tons over 20 years / Millions of dollars over 20 years)
CO - 803 / $0.1 (increase by 3 from 800 in the original application due to bike enhancements)
CO2 - 239,346 / $6.8 (increase by 975 from 238,371 in the original application due to bike enhancements; increases average annual tons saved by 49 from 11,919 to 11,968)
NO x - 65 / $2.6
PM10 - 2 / $0.5
PM2.5 - 2
SO x - 2 / $0.3
VOC - 42 / $0.1
The latest operations and traffic analysis for the proposed scope change did not result in a change to the assumptions used to calculate the original emissions reduction figures. The emissions reductions are a result of ridership increases/mode shifts and VMT reduction produced by creating more free-flowing conditions on the Metro Orange Line (G). The proposed scope change does not change the ability of the project to create more free-flowing conditions on the Metro Orange Line (G). The proposed scope change to remove the elevated bike and pedestrian bridge and implement enhancements to the 14 mile at grade Class I bike increased the CO2 emissions saved by 975 tons from 238,371 to 239,346. The scope change will also improve safety. Environmental Document Type: Statutory Exemption: PRC 21080(b)(11)/CEQA Guidelines 15275(a) - 8/27/18

Upon completion of a project delivery evaluation process, Metro determined a Progressive Design Build (PDB) delivery method is appropriate for the project. PDB works best on projects with sequence and schedule sensitivities, and where design is complex, difficult to define, and/or subject to change. Those criteria exist on this project due to the interfaces with other transit projects (East San Fernando Valley and Sepulveda Transit Corridor Projects) that are currently in the planning stages (and therefore are subject to design and schedule changes), unproven technology elements related to the crossing gates, and necessary interfaces with third party stakeholders. Utilizing the PDB delivery method will provide for the efficient management of risks, the selection of a qualified contractor to deliver a complex project, and the optimization of interface management between internal Metro departments, other projects, and third-party stakeholders. Metro Board approved this new project delivery method at the March 2021 Board meeting.

PDB contract award is scheduled for 08/2022. Final design will begin at issuance of NTP.

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Performance Indicators and Measures						
Measure	**Required For**	**Indicator/Measure**	**Unit**	**Build**	**Future No Build**	**Change**

ATTACHMENT 2

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
ePPR-6065-2021-0010 v0

District	County	Route	EA	Project ID	PPNO
07	Los Angeles			0719000037	5504

Project Title

Metro Orange Line (G) Bus Rapid Transit Improvements

Existing Total Project Cost ($1,000s)									
Component	Prior	21-22	22-23	23-24	24-25	25-26	26-27+	Total	Implementing Agency
E&P (PA&ED)	1,565							1,565	Los Angeles County Metropolitan Tra
PS&E	12,000							12,000	Los Angeles County Metropolitan Tra
R/W SUP (CT)									Los Angeles County Metropolitan Tra
CON SUP (CT)									Los Angeles County Metropolitan Tra
R/W	1,000							1,000	Los Angeles County Metropolitan Tra
CON	140,435							140,435	Los Angeles County Metropolitan Tra
TOTAL	155,000							155,000	
Proposed Total Project Cost ($1,000s)									Notes
E&P (PA&ED)	3,131							3,131	
PS&E	48,000							48,000	
R/W SUP (CT)									
CON SUP (CT)									
R/W	3,000							3,000	
CON	266,169							266,169	
TOTAL	320,300							320,300	

Fund #1:	State SB1 LPP - Local Partnership Program - Competitive program (Committed)								Program Code
Existing Funding ($1,000s)									30.10.724.100
Component	Prior	21-22	22-23	23-24	24-25	25-26	26-27+	Total	Funding Agency
E&P (PA&ED)									
PS&E									$75000 CON EXT. TO 02/28/22
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON	75,000							75,000	
TOTAL	75,000							75,000	
Proposed Funding ($1,000s)									Notes
E&P (PA&ED)									Allocation request will be in March 2022
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON	75,000							75,000	
TOTAL	75,000							75,000	

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
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Fund #2:	Local Funds - Local Transportation Funds (Committed)								Program Code
	Existing Funding ($1,000s)								20.10.400.100
Component	Prior	21-22	22-23	23-24	24-25	25-26	26-27+	Total	Funding Agency
E&P (PA&ED)	1,565							1,565	
PS&E	12,000							12,000	
R/W SUP (CT)									
CON SUP (CT)									
R/W	1,000							1,000	
CON	65,435							65,435	
TOTAL	80,000							80,000	
	Proposed Funding ($1,000s)								Notes
E&P (PA&ED)	3,131							3,131	Added the local funding for grade separation. The $80M is for the gates only.
PS&E	48,000							48,000	
R/W SUP (CT)									
CON SUP (CT)									
R/W	3,000							3,000	
CON	191,169							191,169	
TOTAL	245,300							245,300	

ATTACHMENT 2

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
ePPR-6065-2021-0010 v0

Complete this page for amendments only Date 11/10/2021 20:00:41

District	County	Route	EA	Project ID	PPNO
07	Los Angeles			0719000037	5504

SECTION 1 - All Projects

Project Background

The approved scope includes construction of two aerial grade separated structures that elevate the busway, associated BRT stations and bike/ pedestrian path at Van Nuys & Sepulveda Blvds, and installation of 35 gates.

Metro undertook a detailed analysis of the design and first/last mile connections. Ultimately, the elimination of the bicycle/pedestrian bridges and Tyrone Ave.'s closure are proposed which is due to additional analysis, findings from first/last mile planning for the Van Nuys and Sepulveda stations, and stakeholder concerns received through those processes. Instead, we are proposing to enhance at-grade bicycle and pedestrian improvements along 14 miles of existing multiuse path from Chatsworth to Valley College Stations.

Programming Change Requested

Metro proposes to eliminate the bicycle/pedestrian bridges and Tyrone Ave's closure and replace them with at-grade bicycle and pedestrian improvements along the existing multiuse path that will address the main first/last mile, accessibility, connectivity, and safety deficiencies of the existing scope.

There were 2 tiers of improvements that were analyzed. Tier I improvements will be done from Sepulveda to Van Nuys Stations for a total length of 1.2 miles while Tier 2 improvements will be along the 14 miles of the existing bike path from Chatsworth to Valley Colleg Stations. Tier 2 was chosen because of higher safety benefit, provide pedestrians/bicyclists direct and accessible connections to more destinations and serve the disadvantaged communities along the entire Metro Orange Line (G).

Reason for Proposed Change

The proposed scope is a result of additional analysis of the adjacent grade separated bicycle/pedestrian overcrossing bridges parallel to the Sepulveda and Van Nuys grade separations, findings from the first/last mile planning for the Van Nuys and Sepulveda stations, and stakeholder concerns received through those processes. This will address the first/last mile plan, accessibility, connectivity, and safety deficiencies of the existing scope.

If proposed change will delay one or more components, clearly explain 1) reason for the delay, 2) cost increase related to the delay, and 3) how cost increase will be funded

The proposed scope change will not impact the overall project budget or Local Partnership Program (LPP) funding currently programmed for the project, neither will it impact the milestone schedule on its own.

Other Significant Information

SECTION 2 - For SB1 Project Only

Project Amendment Request (Please follow the individual SB1 program guidelines for specific criteria)

Metro proposes to eliminate the aerial bicycle/pedestrian bridges and Tyrone Ave's closure and replace them with enhance at-grade bicycle and pedestrian improvements along 14 miles of existing multiuse path from Chatsworth to Valley College Stations.

Approvals

I hereby certify that the above information is complete and accurate and all approvals have been obtained for the processing of this amendment request.

Name (Print or Type)	Signature	Title	Date

SECTION 3 - All Projects

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID

ePPR-6065-2021-0010 v0

Attachments

1) Concurrence from Implementing Agency and/or Regional Transportation Planning Agency
2) Project Location Map

Los Angeles County
Metropolitan Transportation Authority
One Gateway Plaza
Los Angeles, CA 90012-2952
213.922.2000 Tel
metro.net

Metro

Attachment E

REQUEST FOR PROJECT SCOPE CHANGE

Date: October 25, 2021

To: Angel Pyle
SB1 Program Coordinator
Caltrans
1120 "N" Street
Sacramento, CA 95814

Attention: Carlo Ramirez, Arthur Murray

Project Name: Metro Orange (G) Line Bus Rapid Transit Improvements

Approved Project Description and Limits: In Los Angeles County on the Metro Orange Line (MOL) route between the North Hollywood Station and Chatsworth Station, BRT improvements will be constructed. The scope includes construction of aerial grade separated structures that would elevate the busway and associated BRT stations at Van Nuys and Sepulveda Blvds. The aerial structure at Sepulveda spans over the City of Los Angeles' Bureau of Street Services Private Crossing, east of the Sepulveda grade separation, and returns to an at-grade alignment at Kester Blvd. The aerial structure at Van Nuys Blvd. also spans over Vesper Ave. and requires the closure of Tyrone Avenue, east of Van Nuys Blvd. An adjacent grade separated bicycle/pedestrian overcrossing that runs parallel to the Sepulveda and Van Nuys grade separations will also be constructed. The Project also includes installation of railroad-type gate systems at 35 MOL crossings along the MOL. (Note: the MOL service was recently renamed Metro G Line)

Current FTIP/FSTIP Description: N/A

Current FTIP/FSTIP Limits: N/A

Provide the approved scope, and explain the proposed change (to scope, cost, or schedule): Please see the approved scope change noted above. The proposed scope change would replace the adjacent grade separated bicycle/pedestrian overcrossing bridges that run parallel to the Sepulveda and Van Nuys grade separations with at-grade bicycle and pedestrian improvements along 14 miles of existing multiuse path from Chatsworth to Valley College Stations. In addition, during advanced design of the grade separation and stakeholder input, it was determined that the closure of Tyrone Avenue and grade separation over the BSS crossing were not required. All other elements of the approved project scope will remain unchanged.

Budget:
The proposed scope change will not impact the overall project budget or Local Partnership Program (LPP) funding currently programmed for the project. A preliminary rough order of magnitude (ROM) estimate of total project cost, conducted during the preliminary engineering phase, indicates a forecasted range of total project cost between $393 and $476 million. However, the elimination of the bicycle grade separation will result in a decrease of approximately $20 million, net of the costs for the pedestrian/bicycle improvements (approximately $8.1 million – Attachment A (Metro G Line Scope Change) Table 5.1) off this estimated total. Once the contractor is selected, total project cost will be known with much greater precision. The project's funding plan currently includes $245.3 million in Measure M and $75 million in SB-1 LPP grant funds. Metro is committed to secure funds for any additional project costs above current programmed revenues.

Schedule:
The proposed scope change is not impacting the milestone schedule on its own. The schedule revisions are due to the change in the project delivery method of the main construction contract. Upon completion of a project delivery evaluation process, Metro determined a Progressive Design Build (PDB) delivery method is appropriate for the project. PDB works best on projects with sequence and schedule sensitivities, and where design is complex, difficult to define, and/or subject to change. Those criteria exist on this project due to the interfaces with other transit projects (East San Fernando Valley and Sepulveda Transit Corridor Projects) that are currently in the planning stages (and therefore are subject to design and schedule changes), unproven technology elements related to the crossing gates, and necessary interfaces with third party stakeholders. Utilizing the PDB delivery method will provide for the efficient management of risks, the selection of a qualified contractor to deliver a complex project, and the optimization of interface management between internal Metro departments, other projects, and third-party stakeholders. Metro Board approved this new project delivery at the March 2021 Board meeting. Metro is actively developing the contract and solicitation package targeting for Winter 2022 release. Significant utility relocations have been completed at Sepulveda and Van Nuys to accommodate the new grade separations. The below tables present the s comparison of the schedule for the proposed scope change to the approved scope. The bicycle/pedestrian improvements are included in the Grade Separation table.

Schedule: Grade Separations

	Current Milestone Date	Proposed Milestone Date	Change (Months)	Current Allocation Date	Proposed Allocation Date	Change (Months)
PAED	8/27/2018	8/27/2018		N/A		
PS&E	6/1/2021	1/3/2022	7	N/A		
R/W	12/31/2021	12/31/2021		N/A		
CON	12/30/2025	12/30/2025		Feb-22	Feb-22	

- Due to no CTC meeting in February, the allocation request will be submitted for the March 2022 CTC Meeting

Schedule: Gates

	Current Milestone Date	Proposed Milestone Date	Change (Months)	Current Allocation Date	Proposed Allocation Date	Change (Months)
PAED	8/27/2018	8/27/2018		N/A		
PS&E	6/1/2021	1/3/2022	7	N/A		
R/W	12/31/2022	12/31/2022		N/A		
CON	12/30/2025	12/30/2025		N/A		

Additional Required Elements:

1. The reason for the proposed change: The proposed scope is a result of additional analysis of the adjacent grade separated bicycle/pedestrian overcrossing bridges parallel to the Sepulveda and Van Nuys grade separations, findings from the first/last mile planning for the Van Nuys and Sepulveda stations, and stakeholder concerns received through those processes. This will address the first/last mile plan, accessibility, connectivity, and safety deficiencies of the existing scope.

2. The impact the proposed scope change would have on the overall cost of the project: Please see summary noted above regarding impact to the overall project cost.

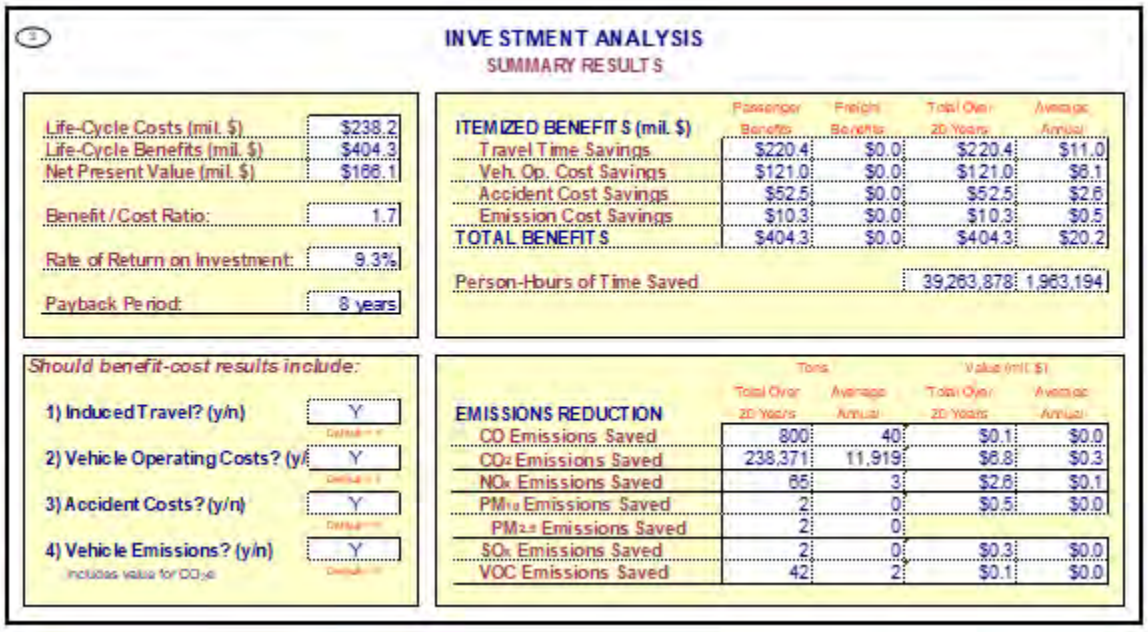
3. An estimate of the impact the proposed scope change would have on the potential of the project to increase benefits as compared to the benefits identified in the project application: There were 2 tiers of improvements that were analyzed in detail for the scope modification. Tier I improvements will be constructed from Sepulveda to Van Nuys Stations for a total length of 1.2 miles while the Tier 2 proposal constructs improvements along the 14 miles of the existing bike path from Chatsworth to Valley College Stations in addition to the Tier 1 improvements. Tier 2 was chosen because it will provide a higher safety benefit, and direct and accessible connections for pedestrians/bicyclists to more destinations and serves the disadvantaged communities along the entire Metro G Line.

   After conducting the Benefit/Cost Analysis (BCA) to calculate and monetize the benefits and costs associated with the existing scope and proposed scope amendment, Metro determined that the proposed scope (Tier 2 Improvements) presented a significant increase in benefits over the existing scope (Attachment A (Metro G Line Scope Change) – Table 2 & 3). The proposed scope results in a benefit cost ratio of 3.2, with net monetized benefits totaling $24.4 million. This is

nearly three times higher than the net benefits provided by the existing scope. The proposed scope provides greater benefits mainly in the areas of safety and health. In addition, the proposed change will make the path more convenient and comfortable to use which will encourage more users. This will yield health benefits through increased active transportation and reduced automobile use and related pollution and emissions. See Attachment A for further discussion of the benefits of the proposed scope change and see below tables for a before and after comparison.

Before: busway grade separations, gates, bike/ped overcrossing bridges

Cal-B/C Version 6.2 Summary Results for existing scope (busway grade separations and gates):



INVESTMENT ANALYSIS

SUMMARY RESULTS

Life-Cycle Costs (mil. $)	$238.2
Life-Cycle Benefits (mil. $)	$404.3
Net Present Value (mil. $)	$166.1
Benefit / Cost Ratio:	1.7
Rate of Return on Investment:	9.3%
Payback Period:	8 years

ITEMIZED BENEFITS (mil. $)	Passenger Benefits	Freight Benefits	Total Over 20 Years	Average Annual
Travel Time Savings	$220.4	$0.0	$220.4	$11.0
Veh. Op. Cost Savings	$121.0	$0.0	$121.0	$6.1
Accident Cost Savings	$52.5	$0.0	$52.5	$2.6
Emission Cost Savings	$10.3	$0.0	$10.3	$0.5
TOTAL BENEFITS	$404.3	$0.0	$404.3	$20.2
Person-Hours of Time Saved			39,283,878	1,963,194

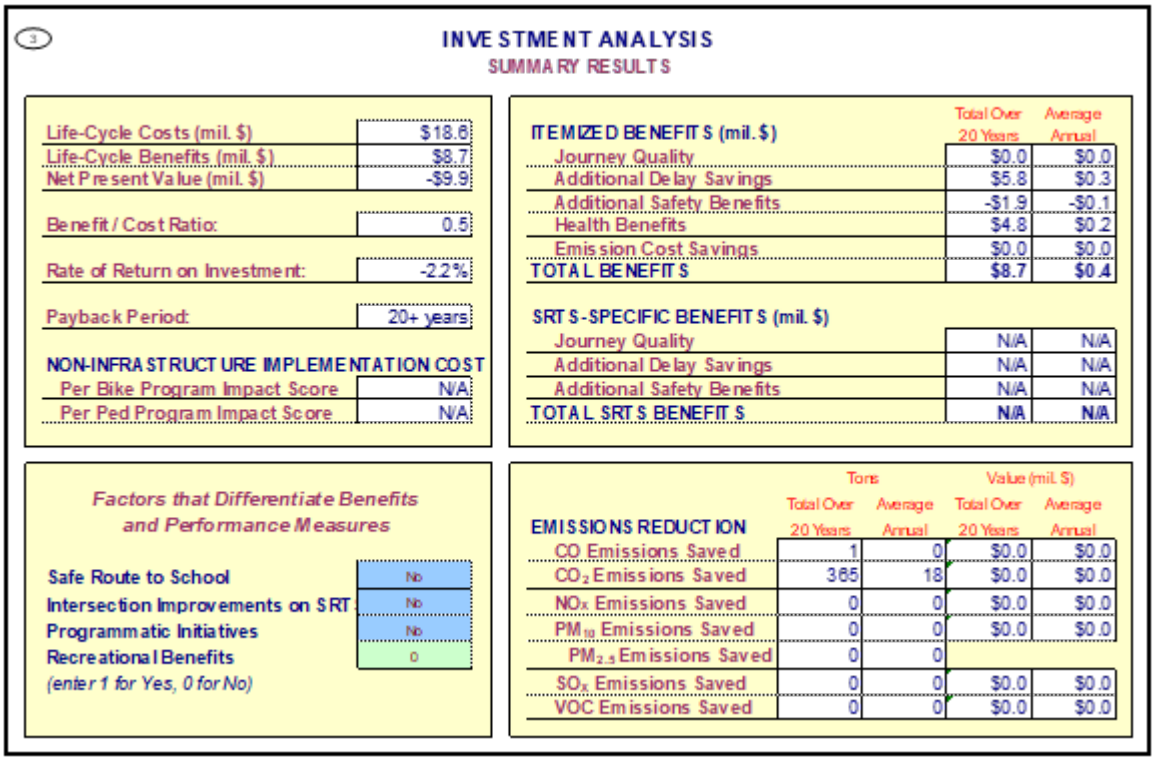
Should benefit-cost results include:

1) Induced Travel? (y/n)	Y
2) Vehicle Operating Costs? (y/	Y
3) Accident Costs? (y/n)	Y
4) Vehicle Emissions? (y/n)	Y

Includes value for CO_2e

EMISSIONS REDUCTION	Tons: Total Over 20 Years	Tons: Average Annual	Value (mil. $): Total Over 20 Years	Value (mil. $): Average Annual
CO Emissions Saved	800	40	$0.1	$0.0
CO_2 Emissions Saved	238,371	11,919	$6.8	$0.3
NO_x Emissions Saved	65	3	$2.6	$0.1
PM_{10} Emissions Saved	2	0	$0.5	$0.0
$PM_{2.5}$ Emissions Saved	2	0		
SO_x Emissions Saved	2	0	$0.3	$0.0
VOC Emissions Saved	42	2	$0.1	$0.0

Cal-B/C AT Version 7.2 Summary Results for existing scope (bicycle/pedestrian overcrossing bridges):



INVESTMENT ANALYSIS
SUMMARY RESULTS

Life-Cycle Costs (mil. $)	$18.6
Life-Cycle Benefits (mil. $)	$8.7
Net Present Value (mil. $)	-$9.9
Benefit / Cost Ratio:	0.5
Rate of Return on Investment:	-2.2%
Payback Period:	20+ years
NON-INFRASTRUCTURE IMPLEMENTATION COST	
Per Bike Program Impact Score	N/A
Per Ped Program Impact Score	N/A

ITEMIZED BENEFITS (mil. $)	Total Over 20 Years	Average Annual
Journey Quality	$0.0	$0.0
Additional Delay Savings	$5.8	$0.3
Additional Safety Benefits	-$1.9	-$0.1
Health Benefits	$4.8	$0.2
Emission Cost Savings	$0.0	$0.0
TOTAL BENEFITS	**$8.7**	**$0.4**
SRTS-SPECIFIC BENEFITS (mil. $)		
Journey Quality	N/A	N/A
Additional Delay Savings	N/A	N/A
Additional Safety Benefits	N/A	N/A
TOTAL SRTS BENEFITS	**N/A**	**N/A**

Factors that Differentiate Benefits and Performance Measures

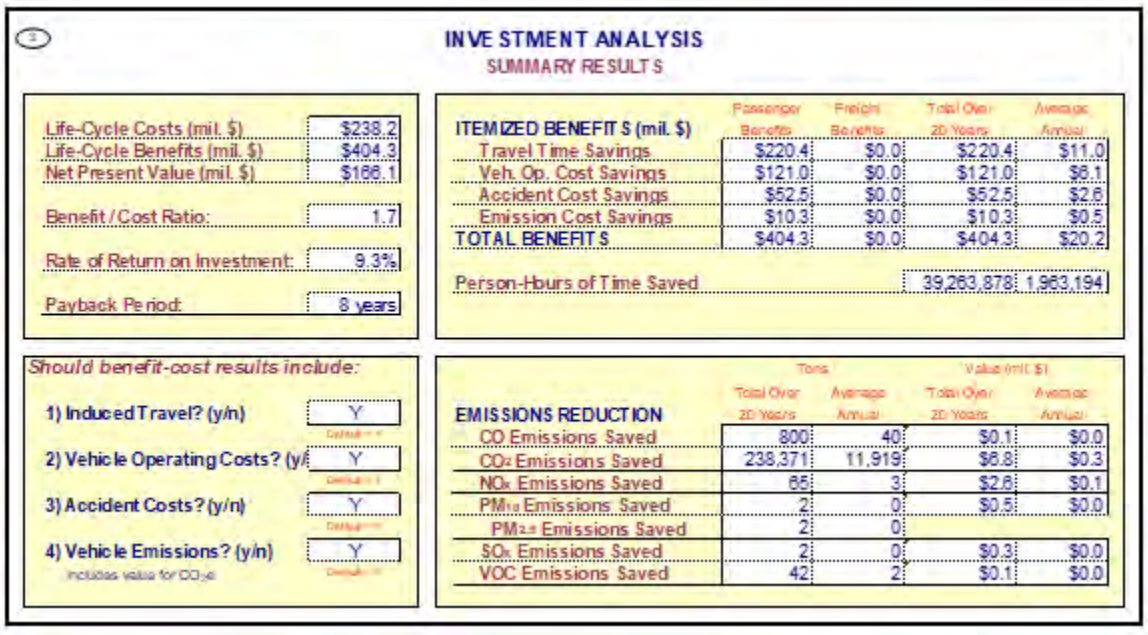
Safe Route to School	No
Intersection Improvements on SRT	No
Programmatic Initiatives	No
Recreational Benefits	0

(enter 1 for Yes, 0 for No)

EMISSIONS REDUCTION	Tons: Total Over 20 Years	Tons: Average Annual	Value (mil. $): Total Over 20 Years	Value (mil. $): Average Annual
CO Emissions Saved	1	0	$0.0	$0.0
CO_2 Emissions Saved	365	18	$0.0	$0.0
NO_X Emissions Saved	0	0	$0.0	$0.0
PM_{10} Emissions Saved	0	0	$0.0	$0.0
$PM_{2.5}$ Emissions Saved	0	0		
SO_X Emissions Saved	0	0	$0.0	$0.0
VOC Emissions Saved	0	0	$0.0	$0.0

After: busway grade separations, gates, at-grade bicycle/pedestrian improvements

Cal-B/C Version 6.2 Summary Results for existing scope (busway grade separations and gates):



INVESTMENT ANALYSIS
SUMMARY RESULTS

Life-Cycle Costs (mil. $)	$238.2
Life-Cycle Benefits (mil. $)	$404.3
Net Present Value (mil. $)	$166.1
Benefit / Cost Ratio:	1.7
Rate of Return on Investment:	9.3%
Payback Period:	8 years

ITEMIZED BENEFITS (mil. $)	Passenger Benefits	Freight Benefits	Total Over 20 Years	Average Annual
Travel Time Savings	$220.4	$0.0	$220.4	$11.0
Veh. Op. Cost Savings	$121.0	$0.0	$121.0	$6.1
Accident Cost Savings	$52.5	$0.0	$52.5	$2.6
Emission Cost Savings	$10.3	$0.0	$10.3	$0.5
TOTAL BENEFITS	$404.3	$0.0	$404.3	$20.2
Person-Hours of Time Saved			39,283,878	1,963,194

Should benefit-cost results include:

1) Induced Travel? (y/n)	Y
2) Vehicle Operating Costs? (y/n)	Y
3) Accident Costs? (y/n)	Y
4) Vehicle Emissions? (y/n)	Y
Includes value for CO_2	

EMISSIONS REDUCTION	Tons: Total Over 20 Years	Tons: Average Annual	Value (mil. $): Total Over 20 Years	Value (mil. $): Average Annual
CO Emissions Saved	800	40	$0.1	$0.0
CO_2 Emissions Saved	238,371	11,919	$6.8	$0.3
NO_X Emissions Saved	65	3	$2.6	$0.1
PM_{10} Emissions Saved	2	0	$0.5	$0.0
$PM_{2.5}$ Emissions Saved	2	0		
SO_X Emissions Saved	2	0	$0.3	$0.0
VOC Emissions Saved	42	2	$0.1	$0.0

Cal-B/C AT Version 7.2 Summary Results for proposed changes (Tier 2 improvements):

INVESTMENT ANALYSIS
SUMMARY RESULTS

Life-Cycle Costs (mil. $)	$7.7
Life-Cycle Benefits (mil. $)	$24.4
Net Present Value (mil. $)	$16.7
Benefit / Cost Ratio:	3.2
Rate of Return on Investment:	17.7%
Payback Period:	7 years
NON-INFRASTRUCTURE IMPLEMENTATION COST	
Per Bike Program Impact Score	N/A
Per Ped Program Impact Score	N/A

ITEMIZED BENEFITS (mil. $)	Total Over 20 Years	Average Annual
Journey Quality	$0.0	$0.0
Additional Delay Savings	$4.6	$0.2
Additional Safety Benefits	$7.0	$0.3
Health Benefits	$12.8	$0.6
Emission Cost Savings	$0.0	$0.0
TOTAL BENEFITS	**$24.4**	**$1.2**
SRTS-SPECIFIC BENEFITS (mil. $)		
Journey Quality	N/A	N/A
Additional Delay Savings	N/A	N/A
Additional Safety Benefits	N/A	N/A
TOTAL SRTS BENEFITS	**N/A**	**N/A**

Factors that Differentiate Benefits and Performance Measures

Safe Route to School	No
Intersection Improvements on SRT	No
Programmatic Initiatives	No
Recreational Benefits	0
(enter 1 for Yes, 0 for No)	

EMISSIONS REDUCTION	Tons: Total Over 20 Years	Tons: Average Annual	Value (mil. $): Total Over 20 Years	Value (mil. $): Average Annual
CO Emissions Saved	3	0	$0.0	$0.0
CO_2 Emissions Saved	975	49	$0.0	$0.0
NO_x Emissions Saved	0	0	$0.0	$0.0
PM_{10} Emissions Saved	0	0	$0.0	$0.0
$PM_{2.5}$ Emissions Saved	0	0		
SO_x Emissions Saved	0	0	$0.0	$0.0
VOC Emissions Saved	0	0	$0.0	$0.0

4. An explanation of the methodology used to develop estimates: Metro staff prepared a comprehensive updated BCA using the Caltrans B/C Active Transportation Model version 7.2 analysis to compare the original scope (aerial grade separated bike path) and proposed scope amendment (at-grade pedestrian/bicycle improvements).

   The Benefit/Cost Analysis referenced in the Baseline Agreement only assessed the impacts of the aerial grade separated structures that would elevate the busway and associated BRT stations at Van Nuys and Sepulveda Blvd., and the railroad-type gate systems at 35 crossings along the Metro G Line, but not the bicycle/pedestrian overcrossing at Sepulveda and Van Nuys. Therefore, the analysis only assessed the impact of the proposed scope change to the bicycle/pedestrian improvements. Therefore, the above before and after tables present the analysis calculated for the bus grade separations and gates, and then the bike improvements separately. You will note that the BCA results do not change for the bus grade separations and gates when comparing the before and after conditions.

5. For projects programmed in the MPO component, evidence of MPO approval and the MPO rationale for their approval: N/A

6. Does this scope change require revalidation of your environmental document? No, the Metro Environmental Compliance Department has confirmed that there is no revalidation required for eliminating the elevated bikeway and the proposed improvements are covered by the existing environmental clearance.

7. Explain the additional public outreach efforts you have made with respect to this proposed scope change and provide a summary of the public response to these efforts: Metro undertook a detailed analysis of the design and first/last mile connections and sought input from project stakeholders. Ultimately, the elimination of the bicycle/pedestrian bridges is due to additional analysis, findings from first/last mile planning for the Van Nuys and Sepulveda stations, and stakeholder concerns received through those processes. In summary, the analysis and stakeholder concerns are:

    - A top priority of first/last mile planning is ensuring access between a station and nearby destinations. The design of the bicycle/pedestrian bridges focuses on through access, which impedes direct and convenient access from the bike path to the station and local destinations.
    - The design of the bicycle/pedestrian bridges requires cycling up a 5% slope for approximately 900 feet. Seniors, children and less experienced cyclists, in particular, those on Metro Bikeshare and similarly heavy bicycles may have difficulty on this slope, so the bicycle/pedestrian bridges are not accessible for all ages and abilities. Alternative on-street options are flat and therefore easy for anyone to ride.
    - Community stakeholders raised concerns over the isolated nature of the bicycle/pedestrian bridges preventing "eyes on the bikeway" compared with on-street options which are visible to motorists, pedestrians and people at adjacent businesses. Law enforcement was also concerned with reduced visibility from below the bicycle/pedestrian bridge impeding observation of suspicious or criminal activity. Emergency access is more difficult on the bicycle/pedestrian bridges because not all emergency vehicles may be able to drive on it, compared with on-street options, which can be accessed from the adjacent travel lane. Safety concerns in the area have proliferated along with the economic downturn associated with the pandemic.
    - The aerial design of the bridges requires an additional route to access the future East San Fernando Valley (ESFV) Light Rail Transit Van Nuys Station, compared with the on-street options, which provide both through travel and access to the ESFV platform on the same route.
    - Acquisition of all or a portion of multiple properties would be required to accommodate the bicycle/pedestrian bridges.

Proposed Changes to the Project Description: Given the stakeholder concerns received, Metro proposes to eliminate the bicycle/pedestrian bridges and replace them with at-grade bicycle and pedestrian improvements along the existing bike path

that will address the main first/last mile, accessibility, connectivity, and safety deficiencies of the existing scope. In addition, during advanced design of the grade separation and stakeholder input, it was determined that the closure of Tyrone Avenue and grade separation over the BSS crossing were not required. All other elements of the approved project scope will remain unchanged. This revised description is incorporated in the proposed revised PPRs (Attachment D).

Proposed Changes to the Project Limits: None

For Federally Funded Projects:
Proposed changes to the FTIP/FSTIP Description: N/A
Proposed changes to the FTIP/FTSIP Limits: N/A

Project Delivery Status:
See above tables that present a side-by-side comparison of the original and current project schedule. Also, the PPRs (Attachment D) reflect the revised schedule and justification for the change.

Original CTC Allocation Dates: N/A

Actual/Currently Anticipated CTC Allocation Dates: (at the time of this request)
CON: March 2022

Explanation for milestone changes: N/A

Local Agency Certification:
I certify that the information provided in the document is accurate and correct. I understand that if the required information has not been provided this form will be returned and the request may be delayed. You may direct any questions to Cosette Stark at starkco@metro.net or (310) 283-3760.

Signature: Cosette Stark

Title: DEO, Grants Management & Oversight

Date: 10/25/21

Agency/Commission: Los Angeles County Metropolitan Transportation Authority

Metro G Line Scope Change

Attachment A

Explanation of Proposed Change

Metro requests to modify the existing project scope of work for the Metro G Line (Orange) BRT Improvements Project to eliminate the two grade-separated bicycle/pedestrian overcrossing bridges at the Van Nuys and Sepulveda Stations, and instead construct at-grade bicycle and pedestrian improvements along 14 miles of existing multiuse path from Chatsworth to Valley College Stations. Table 1 summarizes the existing and proposed scope elements.

Reason for the Proposed Change

Metro undertook a detailed analysis of the design and first/last mile connections. Ultimately, the elimination of the bicycle/pedestrian bridges is due to additional analysis, findings from first/last mile planning for the Van Nuys and Sepulveda stations, and stakeholder concerns received through those processes. In summary, the analysis and stakeholder concerns are:

- A top priority of first/last mile planning is ensuring access between a station and nearby destinations. The design of the bicycle/pedestrian bridges focuses on through access, which impedes direct and convenient access from the bike path to the station and local destinations.
- The design of the bicycle/pedestrian bridges requires cycling up a 5% slope for approximately 900 feet. Seniors, children and less experienced cyclists, in particular, those on Metro Bikeshare and similarly heavy bicycles may have difficulty on this slope, so the bicycle/pedestrian bridges are not accessible for all ages and abilities. Alternative on-street options are flat and therefore easy for anyone to ride.
- Community stakeholders raised concerns over the isolated nature of the bicycle/pedestrian bridges preventing “eyes on the bikeway” compared with on-street options which are visible to motorists, pedestrians and people at adjacent businesses. Law enforcement was also concerned with reduced visibility from below the bicycle/pedestrian bridge impeding observation of suspicious or criminal activity. Emergency access is more difficult on the bicycle/pedestrian bridges because not all emergency vehicles may be able to drive on it, compared with on-street options, which can be accessed from the adjacent travel lane. Safety concerns in the area have proliferated along with the economic downturn associated with the pandemic.
- The aerial design of the bridges requires an additional route to access the future East San Fernando Valley (ESFV) Light Rail Transit Van Nuys Station, compared with the on-street options, which provide both through travel and access to the ESFV platform on the same route.
- Acquisition of all or a portion of multiple properties would be required to accommodate the bicycle/pedestrian bridges.

Given these concerns, Metro proposes to eliminate the bicycle/pedestrian bridges and replace them with at-grade bicycle and pedestrian improvements along the existing bike path that will address the main first/last mile, accessibility, connectivity, and safety deficiencies of the existing scope.

Table 1. Summary of existing and proposed scope elements

Segment	Segment Length (Linear Feet)	Grade-Separated Bike/Ped Overcrossing	Path Widening (12' to 17')	Pathway Resurfacing	New Striping	Bike Locker	Bike Parking	New Ped & Bike Scaled Lighting	Ped/Bike Scaled Lighting Bulb Replacement to LED	Uniform Wayfinding or	Safety Bollards	CCTV
Chatsworth Station										X		
Lassen to Nordhoff	5,338								X			
Nordhoff Station							X			X		
Nordhoff to Parthenia	2,563											
Parthenia to Roscoe	2,976						X					
Roscoe Station							X			X		
Roscoe to Saticoy	4,104				X				X	X		X
Saticoy to Valerio	1,251						X					
Valerio to Sherman	1,254								X	X		X
Sherman Way Station						X	X			X		
Sherman to Vanowen	2,577											
Vanowen to Canoga Station	1,111				X			X				
Canoga Station										X		
Canoga Station to De Soto	2,823			X	X			X		X		
De Soto Station							X			X		
De Soto to Mason	2,537				X			X				
Mason to Winnetka	2,628				X		X	X				
Pierce College Station							X			X		
Winnetka to Victory/Topham	975				X			X				

Segment	Segment Length (Linear Feet)	Grade-Separated Bike/Ped Overcrossing	Path Widening (12' to 17')	Pathway Resurfacing	New Striping	Bike Locker	Bike Parking	New Ped & Bike Scaled Lighting	Ped/Bike Scaled Lighting Bulb Replacement to LED	Uniform Wayfinding or	Safety Bollards	CCTV
Victory/Topham to Corbin	1,657				X							
Corbin to Tampa	2,756				X		X					
Tampa Station							X			X		
Tampa to Wilbur	2,586				X							
Wilbur to Reseda	2,542			X	X				X			
Reseda Station							X			X		
Reseda to Lindley	2,532				X		X					
Lindley to White Oak	2,550				X							
White Oak to Balboa	5,438			X	X		X	X		X		
Balboa Blvd to Victory	3,917				X	X		X		X	X	
Balboa Station							X			X		
Balboa Station to Woodley	5,186			X	X							
Woodley Station							X			X		
Woodley to Haskell	2,570			X	X			X				
Haskell to Existing Sepulveda Sta.	2,735				X				X			
Existing Sepulveda Station		#		O		O	O	O				
Existing Sepulveda Sta. to Sepulveda	725		X		O			X	X	O		
Sepulveda to BSS Crossing	965		X		O			X		O		
BSS Crossing to Kester	1,572				X							
Kester to Van Nuys	2,637		X		O			X		O		

Segment	Segment Length (Linear Feet)	Grade-Separated Bike/Ped Overcrossing	Path Widening (12' to 17')	Pathway Resurfacing	New Striping	Bike Locker	Bike Parking	New Ped & Bike Scaled Lighting	Ped/Bike Scaled Lighting Bulb Replacement to LED	Uniform Wayfinding or	Safety Bollards	CCTV
Van Nuys Station		#		O		O	O	O		X		
Van Nuys to Tyrone	1,313		X		O			X		O		
Tyrone to Hazeltine	1,313				X							
Hazeltine to Woodman/Oxnard	3,036				X							
Woodman Station							X			X		
Woodman/Oxnard to Burbank/Fulton	3,209				X							
Valley College Station							X			X		
Burbank/Fulton to Chandler	1,580						X					

O This element is part of the Original Improvements to the Existing Bike Path and will remain in the project scope

This element is part of the Existing Scope and is being proposed for elimination

X This element is part of the Proposed Scope Change

Impact the proposed change would have to the project

In terms of cost and schedule, the proposed change will not result in changes to the overall project cost, LPP funding request, or project schedule as currently programmed.

The proposed change will increase benefits to bicyclists and pedestrians as described in the following section.

An estimate of the impact the proposed change would have on the potential of the project to deliver the project benefits as compared to the benefits identified in the project application (increase or decrease in benefits) and an explanation of the methodology used to develop the aforementioned estimate

The proposed change will increase the project's benefits to bicyclists and pedestrians based on B/C Active Transportation Model version 7.2. Analysis began with an identification of alternatives to the overcrossing bridges through first/last mile planning efforts for the Van Nuys and Sepulveda stations, input from stakeholders, and field visits conducted during the daytime and in the evening. This initial analysis yielded two sets of improvements to the existing multiuse path in lieu of the overcrossing bridges: Tier 1 and Tier 2. The field visit findings and descriptions of Tier 1 and 2 are detailed in Exhibit A. After conducting benefit/cost analyses using the CAL B/C Active Transportation Model version 7.2 to calculate and monetize the benefits and costs associated with the existing scope and Tier 1 and 2, Metro determined that Tier 2 should be advanced as the package of proposed changes to the existing scope because it presented a significant increase in benefits over the existing scope as compared to Tier 1. The following discussion on project benefits is based on the Tier 2 improvements as previously detailed in Table 1, and referred to throughout this document as "proposed changes." The change in benefits between the existing scope and proposed changes is summarized in Table 2 and detailed in the following sections.

Table 2. Summary of change in benefits.

Benefit	Existing Scope	Proposed Changes	Change in Benefit
Safety	• **Separate cyclists and pedestrians from motor traffic** at Van Nuys and Sepulveda Blvds by constructing grade-separated bicycle/pedestrian overcrossing bridges • **-0.8** avoided bicyclist collisions per year	• **Encourage cyclists and pedestrians to use existing multiuse path separate from motor traffic** by enhancing existing path • **Reduce cyclist and pedestrian conflicts** by widening and restriping path • **Reduce pedestrian and cyclist falls, reducing injuries and improving user experience** by resurfacing path • **Enhance perception of safety** by improving lighting and installing CCTVs • **3.2** avoided bicyclist collisions per year	Increase in benefits due to: • Enhanced safety along existing Class I Bike path to reduce conflicts between cyclists and pedestrians • Reduced bicyclist collisions
Connections	• **Connect cyclists and pedestrians across intersections** at Van Nuys and Sepulveda Blvds with overcrossing bridges • **4 minutes** average travel time savings per trip	• **Connect cyclists and pedestrians to major destinations along 14 miles of existing multiuse path** by improving path conditions from Chatsworth to Valley College Stations • **Enhance user experience and connect bike path users to destinations** by installing or replacing wayfinding signage • **11.5 minutes** average travel time savings per trip	Increase in benefits due to: • Increased connectivity to destinations along a longer segment of the Metro G Line • Improved wayfinding and user experience • Greater travel time savings
Disadvantaged Communities	• **Serve 25,250 disadvantaged community residents** by constructing grade-separated bicycle/pedestrian overcrossing bridges at Van Nuys and Sepulveda Stations	• **Serve 73,621 disadvantaged community residents** by constructing a package of at-grade improvements along the existing bike path from Chatsworth to Valley College Stations	Increase in benefits due to: • Directly serving more disadvantaged community residents

Safety

Currently, elements of the bike path along the Metro G Line corridor bring up concerns of safety and perception of safety, including concrete walls or chain-link fencing that limit egress from the path, insufficient lighting at night, and hazardous striping and pavement conditions. Field visits conducted during both the day and night identified these elements as barriers to safety and security to users.

These conditions present an uncomfortable and potentially dangerous environment for cyclists and pedestrians. Considering the high ridership of the Metro G Line and the opportunity for high volumes of active first/last mile access, strategic and cost-effective safety improvements are proposed, including: pathway resurfacing, new striping, new pedestrian and bike scaled lighting, replacement of light bulbs with LED bulbs, uniform wayfinding or security signage, safety bollards, and CCTV. The safety benefits of these improvements are detailed in Exhibit A. These improvements will improve real and perceived safety and reduce conflicts between bicyclists and pedestrians, therefore encouraging greater use of the existing multiuse path instead of on-street routes. Accordingly, the proposed changes will result in 3.2 avoided bicycle collisions per year. This represents a higher safety benefit over the existing scope. While the existing scope will also encourage greater use of the existing multiuse path, it presents a higher risk of crashes and conflicts as users descend the elevated structures and therefore is actually projected to result in -0.8 avoided bicycle collisions per year. Detail on the comparative analysis of crash reduction is presented in Exhibit B.

Connections

The Metro G Line (Orange) is a vital, high-capacity transit link for an estimated 23,760 weekday daily riders. Metro G Line serves a dense and growing corridor, connecting users in the San Fernando Valley between North Hollywood to Chatsworth, and ridership demand is expected to continue to grow over the next 10 years. It serves passengers connecting to a multitude of destinations, including but not limited to:

- Academic institutions serving over 40,000 students: Los Angeles Valley College, Pierce College, Van Nuys Middle and High Schools
- Civic institutions: Van Nuys City Hall, Van Nuys Courthouse West, the Los Angeles County Register-Recorder, the Los Angeles District Attorney, the Van Nuys Branch Public Library
- Recreational facilities totaling over 2,000 acres: Sepulveda Basin Recreation Area, Van Nuys/Sherman Oaks Recreation Center
- Other major destinations/employers: Westfield Topanga Mall, Warner Center, Van Nuys Airport

By enhancing 14 miles of the adjacent existing multiuse path from Chatsworth to Valley College Stations, the proposed changes will provide convenient and accessible connections for bicyclists and pedestrians to all of the above destinations. The existing scope provides less direct and accessible connections. As it only spans about 1 mile, it is unable to provide direct connections to the two major colleges and large employers. Additionally, it will require users to first descend from the overcrossings in order to connect to destinations on the ground.

The proposed changes will also enable users to connect to destinations faster. New striping to delineate bicyclist and pedestrian paths will reduce conflict between users and pathway resurfacing will improve

surface conditions, resulting in average travel time savings of 11.5 minutes per trip. This is a higher savings than possible under the existing scope which would only result in an average travel time savings of 4 minutes per trip. Detail on comparative analysis of travel time savings is presented in Exhibit B.

Disadvantaged Communities

The existing scope, located at the two stations, is fully located within disadvantaged communities while the proposed changes, spanning 14 miles of the existing multiuse path, is almost fully located within disadvantaged communities. However, the proposed changes serve almost three times the number of disadvantaged community residents -- 73,621 residents compared to 25,250 residents.

Additionally, disadvantaged community residents will be able to access the proposed improvements more easily than the original project. As described, the slope of the original project presents difficulty for seniors, children and less experienced cyclists, in particular, those on heavy bicycles. The proposed improvements take place along the existing at-grade path which is easily accessible to residents of all ages and abilities and has access points at every intersection.

Benefit Cost Analysis Results

The results of the CAL B/C Active Transportation Model version 7.2 analysis indicate that the proposed changes result in higher total net benefits than the existing scope. The model results are presented in Table 3.

Table 3. Benefits/Costs in 2016 discounted dollars

	Existing Scope	Proposed Change
Total Net Benefits	**$8.7 million**	**$24.4 million**
Travel Time Savings	$5.8 million	$4.6 million
Safety Benefits	($1.9 million)	$7.0 million
Health Benefits	$4.8 million	$12.8 million
Total Capital Costs	$18.6 million	$7.7 million
Benefit-Cost Ratio	0.5	3.2

The proposed change results in a benefit cost ratio of 3.2, with net monetized benefits totaling $24.4 million. This is nearly three times higher than the net benefits provided by the existing scope. The proposed scope provides greater benefits mainly in the areas of safety and health. As previously discussed, the proposed change actually provides a positive safety benefit as compared to the existing scope (I.e. a reduction in bicycle crashes rather than an increase in bicycle crashes). In addition, the proposed change will make the path more convenient and comfortable to use which will encourage more users. This will yield health benefits through increased active transportation and reduced automobile use and related pollution and emissions.

Exhibits

- Exhibit A – Metro G Line Bicycle Path Improvements
- Exhibit B – G Line Bike Path Improvements Comparative Analysis

Exhibit A – Metro G Line (Orange) Bicycle Path Improvements

MOTT MACDONALD

IBI

Metro G Line

Bicycle Path Improvements

April 13, 2021

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1 Introduction

1.1 Context

Metro has conducted several efforts to upgrade stations along the G Line (Orange), as well as improve first/last mile access and active transportation infrastructure. Among these efforts were an upgrade of the G Line (Orange) bike path, and specifically the design of an elevated bike path at Sepulveda Station. After a detailed design analysis and input from stakeholders, various concerns were raised regarding the bicycle/pedestrian bridges, including safety and security, right-of-way impacts, maintenance, usability/usefulness to customers, and higher construction costs. Additionally, the existing class 1 bikeway can be maintained and improved to provide comparable levels of active transportation connectivity without a duplicate segment of bicycle/pedestrian bridges. These concerns led staff to a reconsideration of the merits of the original scenario of bicycle/pedestrian bridges.

The First/Last Mile Planning team and consultants under their direction have concluded that a Tier 1 scenario, which includes the existing at-grade bikeway, in conjunction with intersection improvements and station access elements, best meets the needs of bicyclists and pedestrians, and is preferred over pursuing an elevated bikeway structure. The existing at-grade bikeway provides ready access to cross streets for local access with comparable levels of active transportation connectivity without a duplicate segment of aerial bike lanes. The bicycle/pedestrian bridges would present challenges to some users due to a steep climb over a lengthy grade, and would introduce new barriers to safe and convenient station access to the aerial platforms located on each side of the busway. Additionally, the bicycle/pedestrian bridges would reduce connectivity to the surrounding destinations. For example, designs under preliminary consideration would require cyclists seeking to access the busway to descend to grade from the bicycle/pedestrian bridges before ascending to the busway station platforms. Finally, Metro decided to expand improvements to the entirety of the bike path (located wholly within Metro right-of-way), which correspond to Tier 2 improvements in this report.

Metro is committed to use funds initially allocated to the implementation of the elevated bike path to improve safety and comfort for commuters using the bike path. Site analysis has revealed key challenges that can alter the perception of safety for users and make traveling along the path confusing. This report identifies recommended types and location of improvements that would significantly improve the traveling experience. Pictures and renderings of representative locations are shown to provide a sample of the implementation approach and give an overview of the expected results. A preliminary cost assessment of these improvements is also provided.

1.2 Methodology

Field visits were conducted both during daytime and in the evening. Stations and the bike path itself were assessed in order to identify specific needs for both areas. An aerial assessment using Google Earth was also conducted to confirm findings on the ground. Point improvements were identified for specific locations along the path, in addition to general improvements to be implemented throughout.

1.3 Recommended Improvements

The field visits and aerial assessment identified two key challenges that impact the quality of the traveling experience along the bike path:

- *Safety*: Several elements are affecting safety and perception of safety along the bike path. For example, along several segments of the path are lined by concrete walls or chain-link fencing, limiting users' ability to exit the path and avoid potential threat on the path. Additionally, lighting at night is often insufficient, either because the lighting is too high up and does not adequately light the path, or absent altogether. The night field visit also identified several light posts that were malfunctioning, leaving stretches of the path in the dark. Finally, striping and pavement conditions create potential for falls and collisions. Poor delineation between pedestrian uses and bicycle uses lead to conflicts between users, with pedestrians often wandering over the bicycle lanes and creating risks of collision. It was also noted in some areas that the pavement was cracked and uneven, which can cause falls and injuries.
- *Wayfinding*: Field visits also identified inadequate or confusing signage throughout the pathway. Some sections would benefit from additional signage to clearly identify where the path continues. Additionally, several types of signs are used throughout the path, which can make it difficult for users to find them. It was also noted that signage at key locations, for instance in places where pedestrians cross, would be beneficial to limit conflicts and collisions.

A third category of improvements relates to amenities and improvements that would enhance the experience and improve users' ability to adopt biking and the use of the path as a regular part of their commute. They include additional bike lockers and racks. Appendix A shows a map of the bike path with the specific location of suggested improvements.

2 Improvement Typology

2.1 Pathway Resurfacing

Certain areas along the path are harder to navigate due to broken, cracked asphalt. Treatments for pathway resurfacing include a slurry seal coat to address existing cracks and uneven surfaces in the asphalt. Segments identified as needing resurfacing include:

- Canoga Station to De Soto Ave
- A portion of Wilbur Ave to Reseda Blvd
- White Oak to Balboa Blvd
- Woodley Ave to Haskell Ave

2.2 Striping

One generalized issue identified on the G Line (Orange) bike path is the lack of delineation between the pedestrian path and the bike path itself. Although the first and last segments of the path are well identified, there is a need for re-striping the entire segment between Vanowen and Kester to limit conflicts and collisions between users.

2.3 Bike Lockers and Parking

All stations currently have bike lockers available for riders who need to hop off their bike and use transit. However, it would be beneficial for complementary bike racks and parking be made available outside of station areas, at key locations along the path. The bike lockers at the Sherman Way Station are rusting and need replacement.

2.4 Lighting

Field visits showed insufficient lighting along several segments of the path. Moreover, a night ride showed that several of the lights were broken or malfunctioning. This issue significantly affects perceptions of safety when riding at night. Human-scaled LED lighting should be added to segments such as from Vanowen Street to the Victory Boulevard/ Topham Street intersection, and additional funds should be allocated for maintenance and repairs.

2.5 Wayfinding

Different typologies of signs ae used along the pathway to indicate connections and location of the bike path. This lack of continuity in visual identity is somewhat confusing, as riders cannot quickly identify the signs and may miss the information they are looking for. Additionally, the number of signs is insufficient. The development of a streamlined, branded signage strategy would greatly improve the user experience.

Uniform wayfinding signage is recommended at stations and a number of decision-point locations along the bike path. Security signage is recommended at locations where pedestrian and bicyclist safety would need to be prioritized, such as long bikeway stretches without an outlet.

2.6 Safety Bollards

Safety bollards are an easy add-on that can have significant impacts on safety and perception of safety. The Balboa Blvd undercrossing is an area that could benefit from new bollards when connecting to the Balboa Blvd sidewalks. Bollards would give warning slow merging bicyclists with other bicyclists and pedestrians along Balboa Blvd.

2.7 CCTV

CCTV is recommended in two locations along the bikeway, just north of Saticoy Street and just north of Sherman Way. These bikeway corridors are unique in that they both run directly adjacent to back of long commercial buildings on their west side. On the east side of both corridors, there is a continuous approximately 6-foot tall fence that creates a 'boxed-in' effect and safety concern for 1,060 feet in the Saticoy St section and 865 feet in the Sherman Way section. The recommended locations are feasible for CCTV as they are both reasonably close to an existing conduit bank along the Metro G Line Busway.

The addition of CCTV cameras along the path would improve safety to provide law enforcement the ability to quickly identify criminal activity, collisions or other incidents occurring along the path. Ideally, the CCTV cameras would be connected to a source for monitoring, such as at Metro's Bus Operations Control Center. This improvement should be accompanied by security signage informing users of the presence of cameras, as the signs themselves can act as a sense of security and deterrent for unlawful activity.

3. Improvement Tables

3.1 Original Improvements to Existing Bike Path

Segment	Segment Length (in Linear Feet)	Pathway Widening (12' to 17')	Pathway Resurfacing	New Striping	Bike Locker	Bike Parking	New Ped & Bike Scaled Lighting	Ped & Bike Scaled Lighting Bulb Replacement to LED	Uniform Wayfinding or Security Signage	Replace Fencing	Safety Bollards	CCTV
Existing Sepulveda Station			O		O	O	O					
Existing Sepulveda Sta. to Sepulveda	725			O					O			
Sepulveda to BSS Crossing	965			O					O			
BSS Crossing to Kester	1,572											
Kester to Van Nuys	2,637			O					O			
Van Nuys Station			O		O	O	O					
Van Nuys to Tyrone	1,313			O					O			

3.2 Tier 1 Scenario

Segment	Segment Length (in Linear Feet)	Pathway Widening (12' to 17')	Pathway Resurfacing	New Striping	Bike Locker	Bike Parking	New Ped & Bike Scaled Lighting	Ped & Bike Scaled Lighting Bulb Replacement to LED	Uniform Wayfinding or Security Signage	Replace Fencing	Safety Bollards	CCTV
Existing Sepulveda Station			O		O	O	O					
Existing Sepulveda Sta. to Sepulveda	725	#		O			#		O	#		
Sepulveda to BSS Crossing	965	#		O			#		O	#		
BSS Crossing to Kester	1,572											
Kester to Van Nuys	2,637	#		O			#		O	#		
Van Nuys Station			O		O	O	O					
Van Nuys to Tyrone	1,313	#		O			#		O	#		

O This element first originated in the Original Improvements to Existing Bike Path
This element first originated in the Tier 1 Scenario

3.2 Tier 2 Scenario

Segment	Segment Length (in Linear Feet)	Pathway Widening (12' to 17')	Pathway Resurfacing	New Striping	Bike Locker	Bike Parking	New Ped & Bike Scaled Lighting	Ped & Bike Scaled Lighting Bulb Replacement to LED	Uniform Wayfinding or Security Signage	Replace Fencing	Safety Bollards	CCTV
Chatsworth Station									X			
Lassen to Nordhoff	5,338							X				
Nordhoff Station						X			X			
Nordhoff to Parthenia	2,563											
Parthenia to Roscoe	2,976					X						
Roscoe Station						X			X			
Roscoe to Saticoy	4,104			X				X	X			X
Saticoy to Valerio	1,251					X						
Valerio to Sherman	1,254							X	X			X
Sherman Way Station					X	X			X			
Sherman to Vanowen	2,577											
Vanowen to Canoga Station	1,111			X			X					
Canoga Station									X			
Canoga Station to De Soto	2,823		X	X			X		X			
De Soto Station						X			X			
De Soto to Mason	2,537			X			X					
Mason to Winnetka	2,628			X		X	X					
Pierce College Station						X			X			
Winnetka to Victory/Topham	975			X			X					
Victory/Topham to Corbin	1,657			X								
Corbin to Tampa	2,756			X		X						
Tampa Station						X			X			
Tampa to Wilbur	2,586			X								
Wilbur to Reseda	2,542		X	X				X				
Reseda Station						X			X			
Reseda to Lindley	2,532			X		X						
Lindley to White Oak	2,550			X								
White Oak to Balboa	5,438		X	X		X	X		X			
Balboa Blvd to Victory	3,917			X	X		X		X		X	
Balboa Station						X			X			
Balboa Station to Woodley	5,186		X	X								
Woodley Station						X			X			
Woodley to Haskell	2,570		X	X			X					
Haskell to Existing Sepulveda Station	2,735			X				X				
Existing Sepulveda Station			O		O	O	O					
Existing Sepulveda Sta. to Sepulveda	725	#		O			#	X	O	#		
Sepulveda to BSS Crossing	965	#		O			#		O	#		
BSS Crossing to Kester	1,572			X								
Kester to Van Nuys	2,637	#		O			#		O	#		
Van Nuys Station			O		O	O	O		X			
Van Nuys to Tyrone	1,313	#		O			#		O	#		
Tyrone to Hazeltine	1,313			X								
Hazeltine to Woodman/Oxnard	3,036			X								
Woodman Station						X			X			
Woodman/Oxnard to Burbank/Fulton	3,209			X								
Valley College Station						X			X			
Burbank/Fulton to Chandler	1,580					X						

O This element first originated in the Original Improvements to Existing Bike Path
This element first originated in the Tier 1 Scenario
X This element first originated in the Tier 2 Scenario

4 Representative Location Plans

The recommended safety and wayfinding improvements have the ability to reshape how the G Line (Orange) Bikeway looks and feels for pedestrians and bicyclists. The two figures below simulate how these safety and wayfinding improvements can transform and improve the entire corridor. A more inviting bike path would increase use and promote additional safety due to an increase in pedestrians and bicyclists. Figure 4.1 shows the approximately 13-foot-wide bikeway adjacent to Canoga Station facing west towards Canoga Boulevard. Figure 4.2 shows a simulation of the bikeway with improvements. Figure 4.3 shows a portion of the bikeway segment between the Canoga Station and De Soto Ave, facing southeast. Figure 4.4 shows a simulation of the bikeway with improvements. The bikeway shown here is about 13 feet in width and expands to 16 feet further away from the viewpoint.

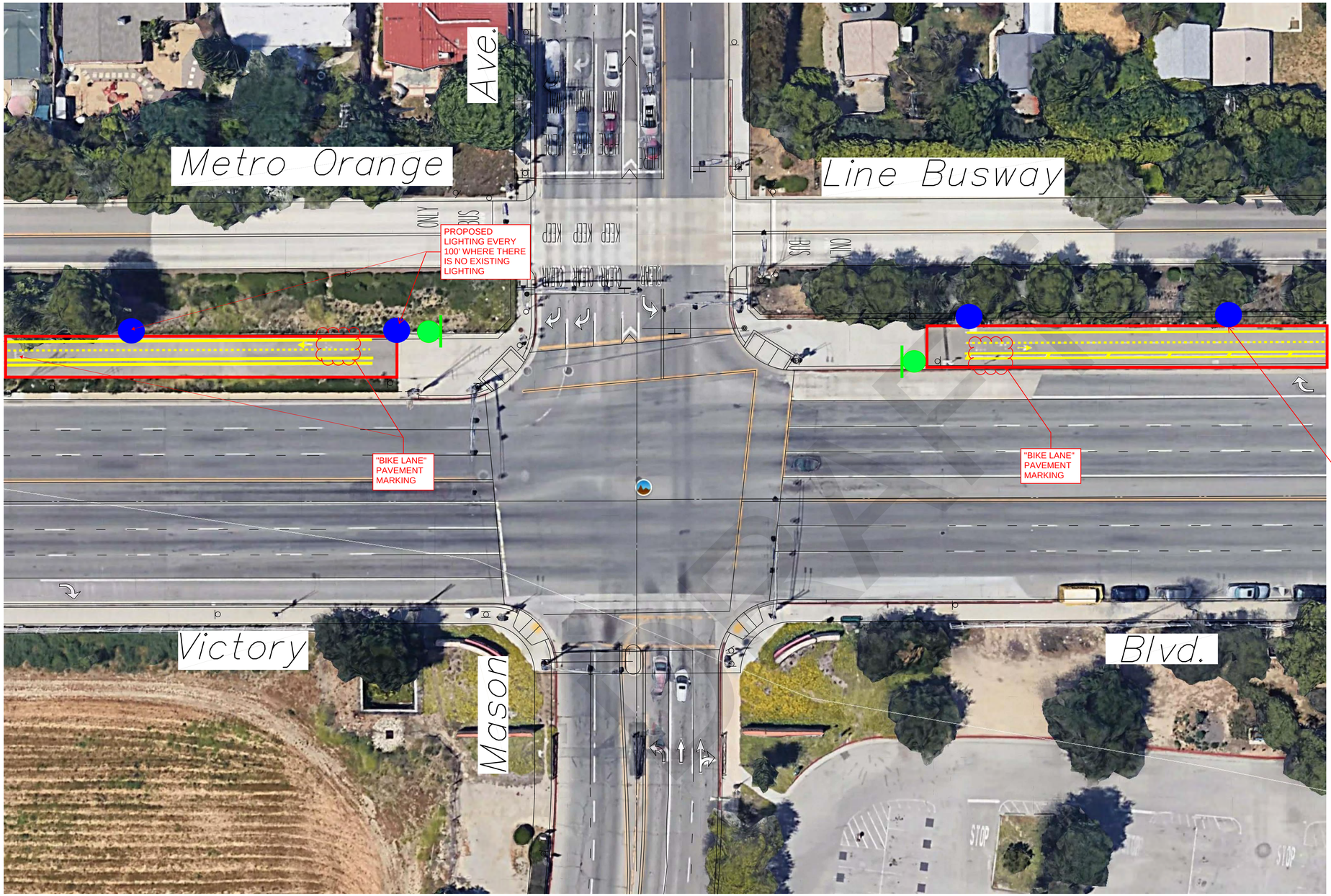
4.1 Plans and Photo Simulation

Figure 4.1: Canoga Station facing West (Existing)

Figure 4.2: Canoga Station facing West (Tier 2 Simulated)

Figure 4.3: Bikeway Between Canoga Station and De Soto facing Southeast (Existing)

Figure 4.4: Bikeway Between Canoga Station and De Soto facing Southeast (Tier 2 Simulated)



LEGEND

- BIKE PATH RESURFACE IMPROVEMENTS
- PROPOSED STRIPING
- PROPOSED LED LIGHTING POST
- WAYFINDING SIGN

SCALE: 1"=20'

20' 10' 0 20' 40'

REV	DATE	BY	APP	REQ NO	EXPIRES	SEAL HOLDER	DESCRIPTION

DESIGNED BY
DRAWN BY
CHECKED BY
IN CHARGE
DATE

Metro
LOS ANGELES COUNTY
METROPOLITAN TRANSPORTATION AUTHORITY

FOR INFORMATION ONLY
NOT FOR CONSTRUCTION

METRO G LINE (ORANGE) BIKE LANE IMPROVEMENTS

MASON AVE.
VICTORY BLVD. & BUSWAY

CONTRACT NO AE36687-001
DRAWING NO
REV
SCALE 1"=20'
SHEET NO

CONSULTANT BUSINESS
TAX REGISTRATION NUMBER : 0002496950-0001-2

1"=20' ORIGINAL MAP SCALE 1"=40'
20 10 0 20 40 60 80 100 FEET
40 20 0 40 80 120 160 200 FEET

SCALES
HORIZ. 1"= 20'
VERT. 1"= N/A

SHEET OF

INDEX NUMBER

C:\Users\vmy.frank\Desktop\WDL - Bike Path\Victory-Mason_Exhibit.dwg Mar 22, 2021 5:11pm vmy.frank

5 Cost Estimates

Below are the cost estimates for the recommended Original, Tier 1, and Tier 2 Scenario improvements along the Metro G Line (Orange) Bike Path. Table 5.1 below shows the unit cost and the projected number of units for each improvement. The total projected cost is over $8.1 million.

For Tier 2 improvements only, the cost estimates provided have excluded a second priority of improvements to maintain close to the $5 million budget for this study. Those improvements include bike repair at every station, landscaping and shade, upgraded fencing, and new pedestrian and bike scaled lighting from Balboa Station to Woodley Avenue as this portion of the bike path is outside Metro right-of-way. With these improvements included, the cost estimate is over $11 million.

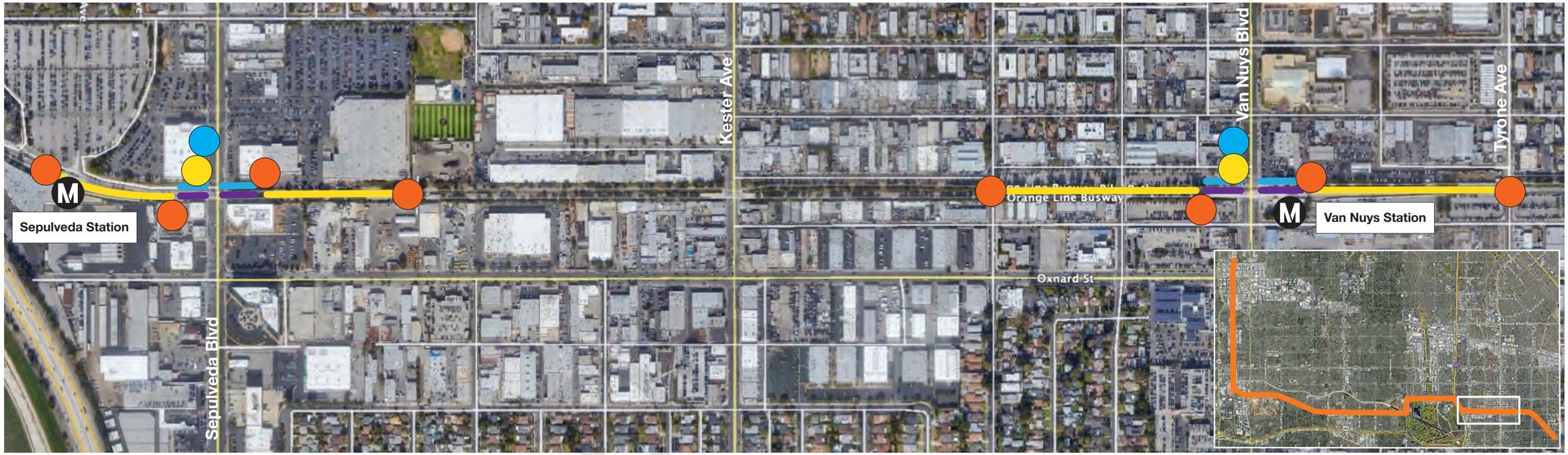
Table 5.1: Original Improvements, Tier 1, and Tier 2 Scenario Cost Estimates

Improvements	Unit	Unit Cost	Number of Units	Projected Cost	Comments
Pathway Widening (12' to 17')	LF	$110.00	5,640	**$620,400.00**	Remove (E) improvement, earthwork, install new 5' wide Bike path 4" AC+ 6"AB over 12"subgrade compacted
Pathway Resurfacing	SF	$1.20	209,261	**$251,113.20**	Slurry Seal Coat
New Striping	LF	$14.12	60,751	**$857,804.12**	New Striping (3 LF per RF of Bike Lane)
Bike Locker	EA	$9,400.00	5	**$47,000.00**	Supply & Install
Bike Parking	EA	$1,400.00	20	**$28,000.00**	Bike Rack & Pavement Marking
New Ped & Bike Scaled Lighting	EA	$18,146.57	292	**$5,300,793.78**	New Lighting Pole, Pole base, Pull Box, 100LF Conduit/Wire, Trench, Patch
Ped & Bike Scaled Lighting Bulb Replacement to LED	EA	$1,741.81	75	**$130,635.86**	Replace Pole Fixture Head to LED Fixture
Uniform Wayfinding and Security Signage	EA	$900.00	46	**$41,400.00**	Includes decision, confirmation, turn and off-bikeway signs in both directions
Replace Fencing	LF	$208.00	3,726	**$775,008.00**	Remove (E) Fence and Install 6' H. Green Wired Fence
Safety Bollards	EA	$3,100.00	20	**$62,000.00**	Add New Safety Bollard 4" Pipe Infill
CCTV	EA	$19,815.96	2	**$39,631.93**	CCTV Camera, Mounting Pole, Pole Base, Pull Box, 100LF Conduit/Wire, Trench, Patch
Total Cost				**$8,153,786.89**	

Metro G Line (Orange) Bike Path Safety Improvements

Original Improvements to Existing Bike Path

Existing Sepulveda Station to Tyrone Ave



- Bike Parking
- Bike Locker
- Bike Repair
- Uniform Wayfinding and Security Signage
- CCTV
- Safety Bollards
- Pathway Resurfacing
- New Striping
- New Ped & Bike Scaled Lighting
- Ped & Bike Scaled LED Lighting Bulb Replacement
- Replace Fencing
- Path Widening

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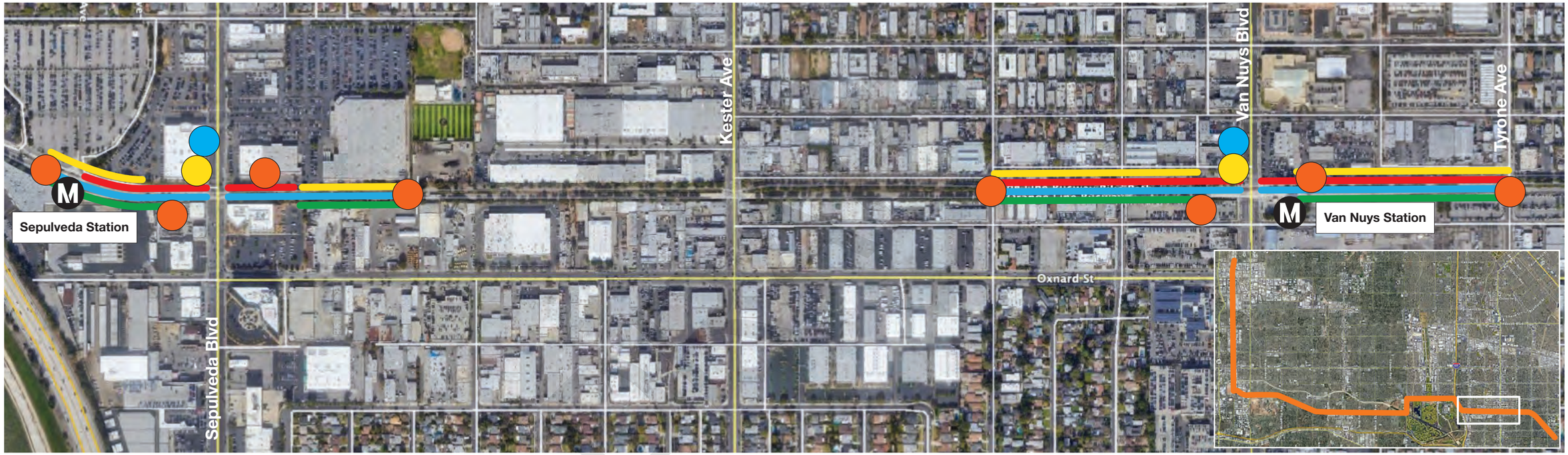
Metro G Line (Orange) Bike Path Safety Improvements

Tier 1 Scenario

Existing Sepulveda Station to Tyrone Ave



- Bike Parking
- Bike Locker
- Bike Repair
- Uniform Wayfinding and Security Signage
- CCTV
- Safety Bollards
- Pathway Resurfacing
- New Striping
- New Ped & Bike Scaled Lighting
- Ped & Bike Scaled LED Lighting Bulb Replacement
- Replace Fencing
- Path Widening

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Metro G Line (Orange) Bike Path Safety Improvements

Tier 2 Scenario: Chatsworth Station to Nordhoff St

- Bike Parking
- Bike Locker
- Uniform Wayfinding and Security Signage
- CCTV
- Safety Bollards
- Pathway Resurfacing
- New Striping
- New Ped & Bike Scaled Lighting
- Ped & Bike Scaled LED Lighting Bulb Replacement

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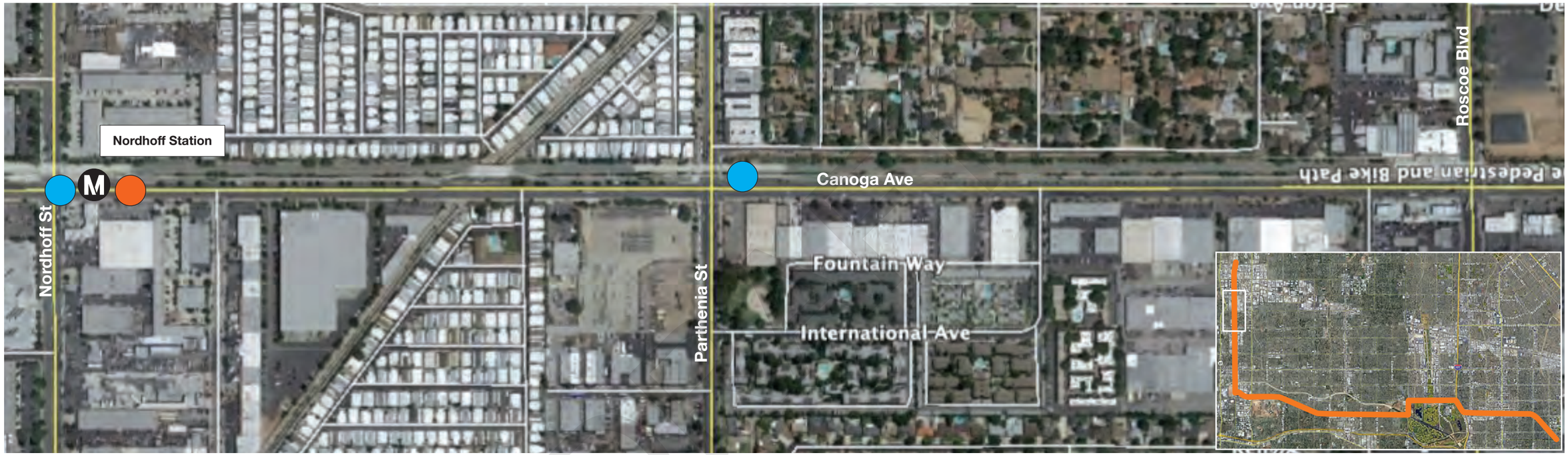
Metro G Line (Orange) Bike Path Safety Improvements

Tier 2 Scenario: Nordhoff St to Roscoe Blvd



- Bike Parking
- Bike Locker
- Uniform Wayfinding and Security Signage
- CCTV
- Safety Bollards
- Pathway Resurfacing
- New Striping
- New Ped & Bike Scaled Lighting
- Ped & Bike Scaled LED Lighting Bulb Replacement

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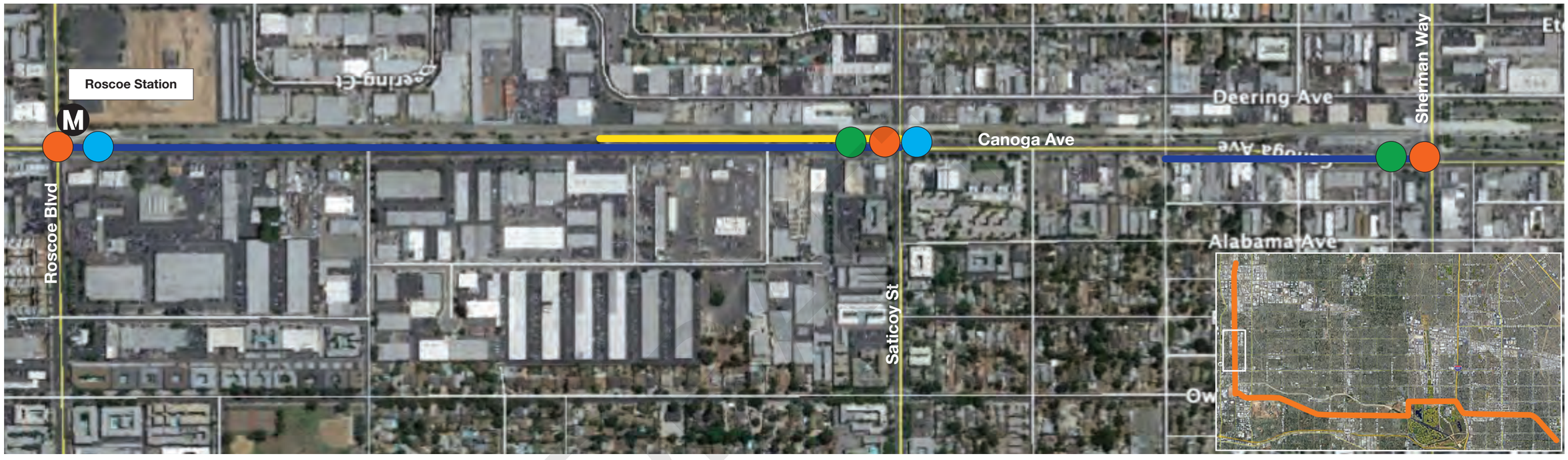
Metro G Line (Orange) Bike Path Safety Improvements

Tier 2 Scenario: Roscoe Blvd to Sherman Way



- Bike Parking
- Bike Locker
- Uniform Wayfinding and Security Signage
- CCTV
- Safety Bollards
- Pathway Resurfacing
- New Striping
- New Ped & Bike Scaled Lighting
- Ped & Bike Scaled LED Lighting Bulb Replacement

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Metro G Line (Orange) Bike Path Safety Improvements

Tier 2 Scenario: Sherman Way to Canoga Station

- Bike Parking
- Bike Locker
- Uniform Wayfinding and Security Signage
- CCTV
- Safety Bollards
- Pathway Resurfacing
- New Striping
- New Ped & Bike Scaled Lighting
- Ped & Bike Scaled LED Lighting Bulb Replacement

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Metro G Line (Orange) Bike Path Safety Improvements

Tier 2 Scenario: Canoga Station to Mason Ave

- Bike Parking
- Bike Locker
- Uniform Wayfinding and Security Signage
- CCTV
- Safety Bollards
- Pathway Resurfacing
- New Striping
- New Ped & Bike Scaled Lighting
- Ped & Bike Scaled LED Lighting Bulb Replacement

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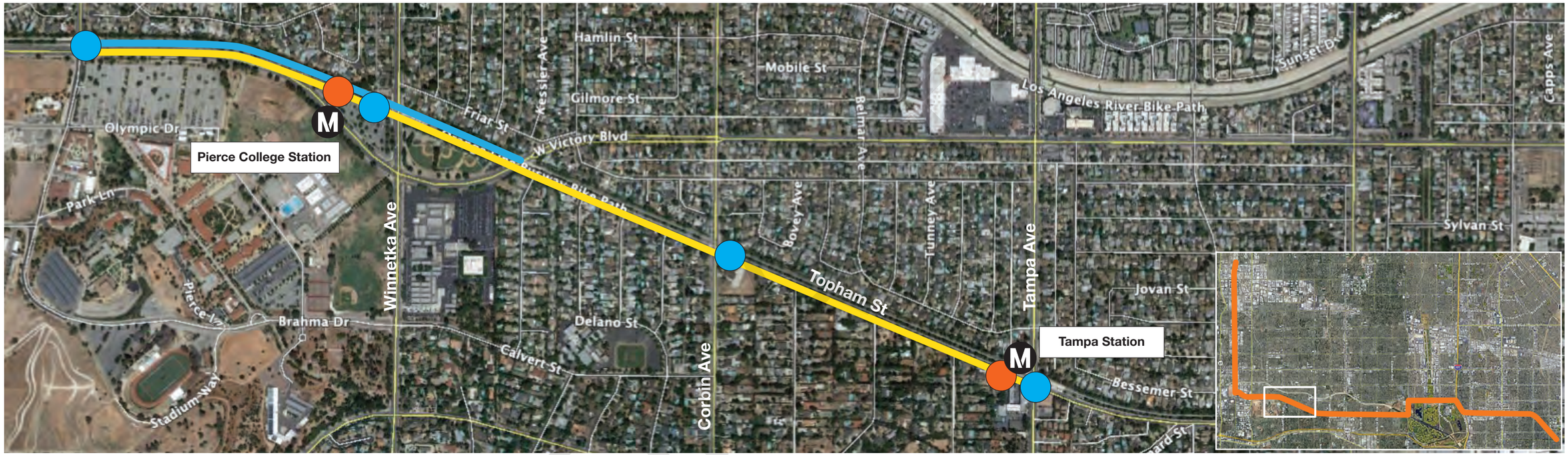
Metro G Line (Orange) Bike Path Safety Improvements

Tier 2 Scenario: Mason Ave to Tampa Ave



- Bike Parking
- Bike Locker
- Uniform Wayfinding and Security Signage
- CCTV
- Safety Bollards
- Pathway Resurfacing
- New Striping
- New Ped & Bike Scaled Lighting
- Ped & Bike Scaled LED Lighting Bulb Replacement

Metro

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Metro G Line (Orange) Bike Path Safety Improvements

Tier 2 Scenario: Tampa Ave to Lindley Ave

- Bike Parking
- Bike Locker
- Uniform Wayfinding and Security Signage
- CCTV
- Safety Bollards
- Pathway Resurfacing
- New Striping
- New Ped & Bike Scaled Lighting
- Ped & Bike Scaled LED Lighting Bulb Replacement

Metro

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Metro G Line (Orange) Bike Path Safety Improvements

Tier 2 Scenario: Lindley Ave to Balboa Station

- Bike Parking
- Bike Locker
- Uniform Wayfinding and Security Signage
- CCTV
- Safety Bollards
- Pathway Resurfacing
- New Striping
- New Ped & Bike Scaled Lighting
- Ped & Bike Scaled LED Lighting Bulb Replacement

Metro

IBI Defining the cities of tomorrow

Metro G Line (Orange) Bike Path Safety Improvements

Tier 2 Scenario: Balboa Station to Haskell Ave

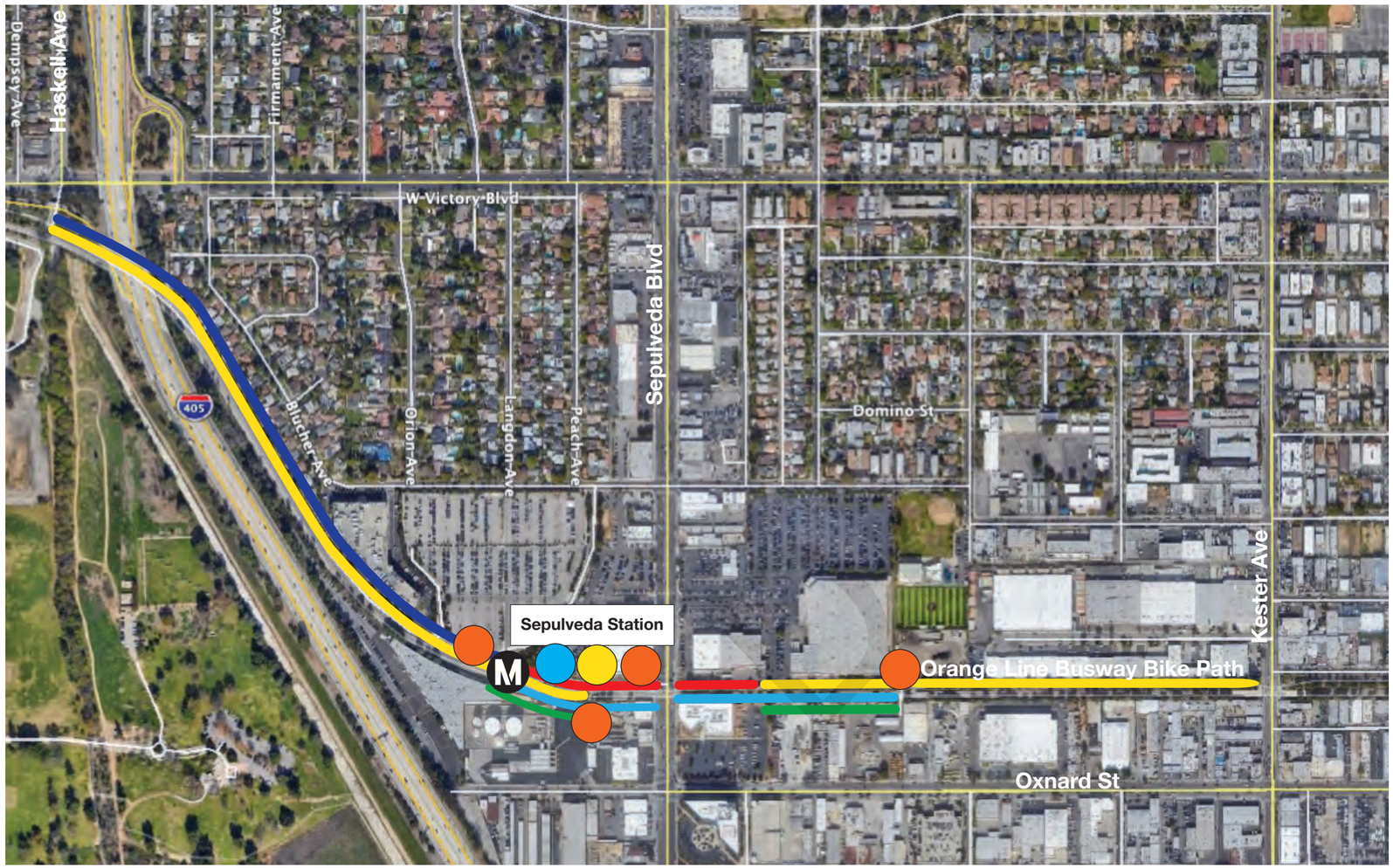
- Bike Parking
- Bike Locker
- Uniform Wayfinding and Security Signage
- CCTV
- Safety Bollards
- Pathway Resurfacing
- New Striping
- New Ped & Bike Scaled Lighting
- Ped & Bike Scaled LED Lighting Bulb Replacement

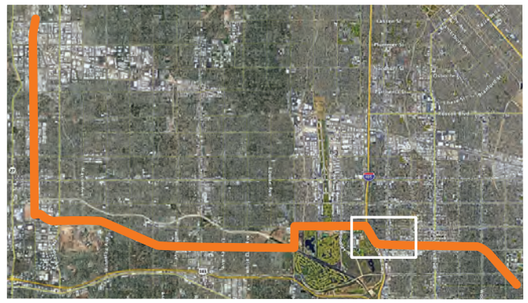
Metro

IBI Defining the cities of tomorrow

Metro G Line (Orange) Bike Path Safety Improvements

Tier 2 Scenario: Haskell Ave to Kester Ave





- Bike Parking
- Bike Locker
- Bike Repair
- Uniform Wayfinding and Security Signage
- CCTV
- Safety Bollards
- Pathway Resurfacing
- New Striping
- New Ped & Bike Scaled Lighting
- Ped & Bike Scaled LED Lighting Bulb Replacement
- Replace Fencing
- Path Widening

Metro

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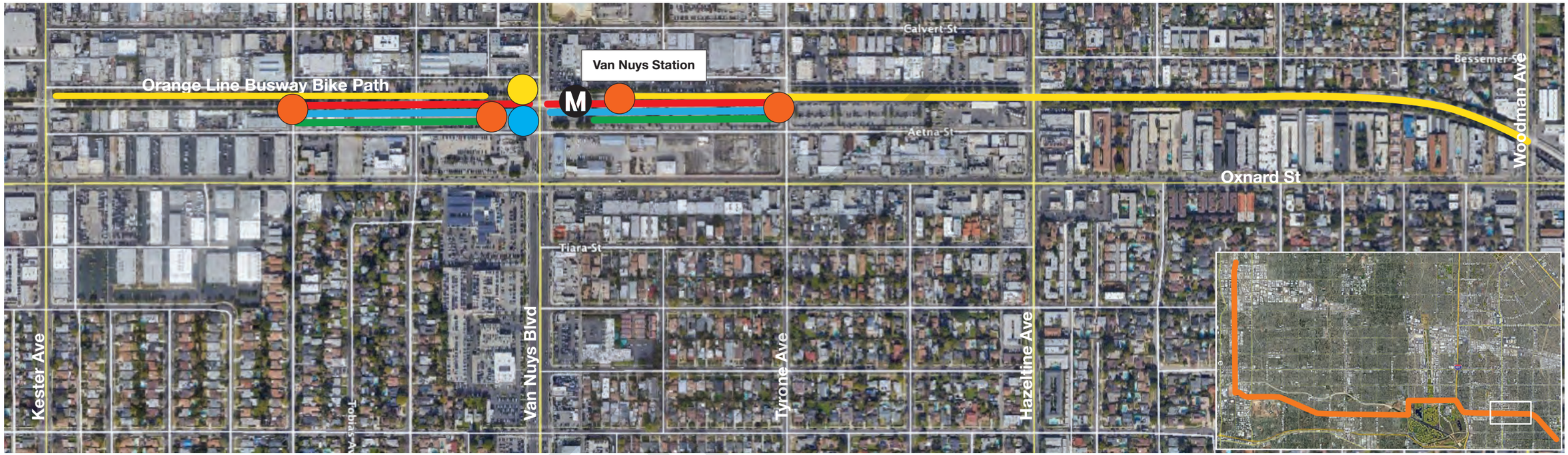
Metro G Line (Orange) Bike Path Safety Improvements

Tier 2 Scenario: Kester Ave to Woodman Ave



- Bike Parking
- Bike Locker
- Bike Repair
- Uniform Wayfinding and Security Signage
- CCTV
- Safety Bollards
- Pathway Resurfacing
- New Striping
- New Ped & Bike Scaled Lighting
- Ped & Bike Scaled LED Lighting Bulb Replacement
- Replace Fencing
- Path Widening

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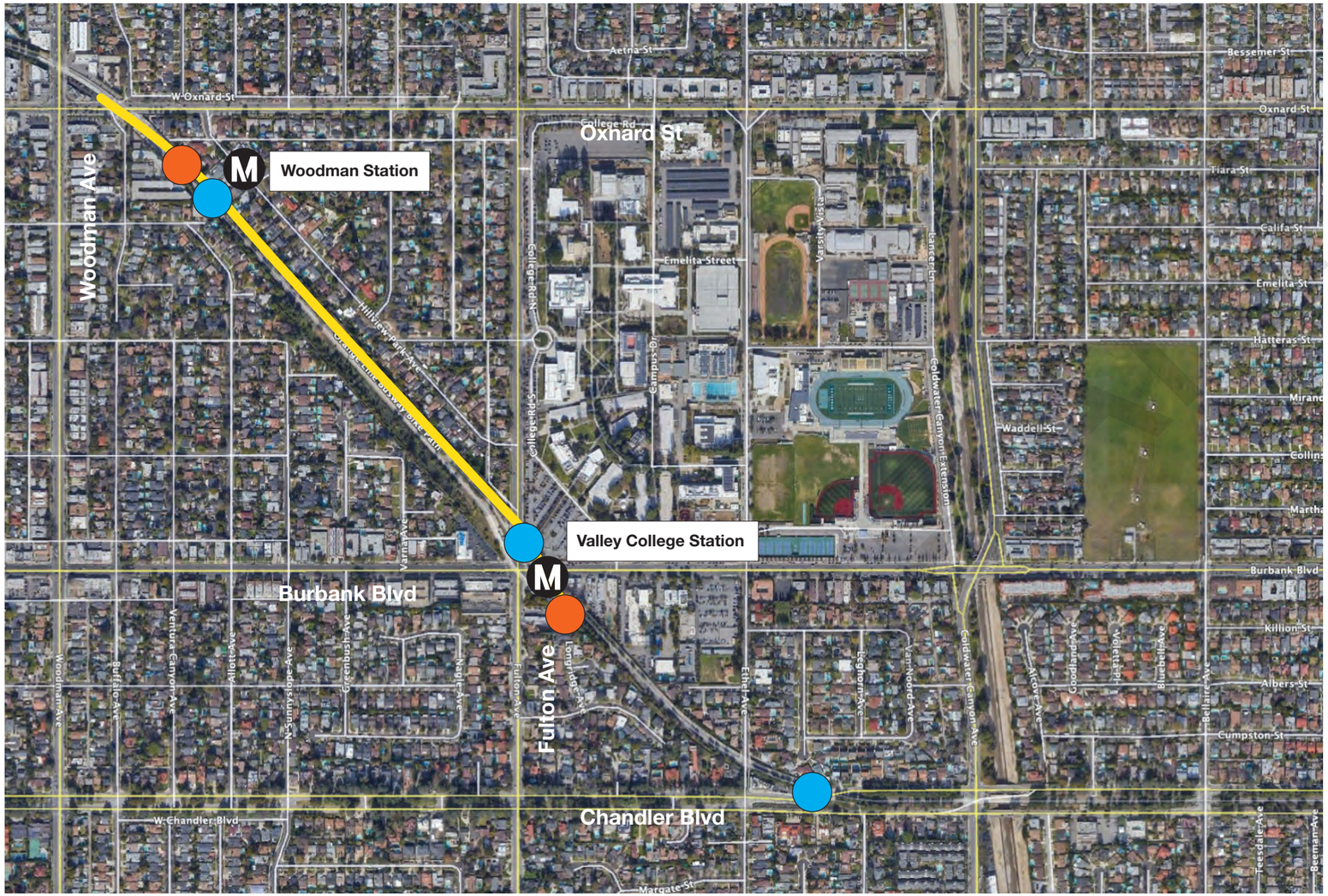
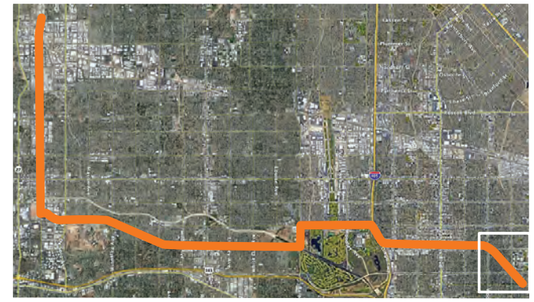
Metro G Line (Orange) Bike Path Safety Improvements

Tier 2 Scenario: Woodman Ave to Chandler Blvd





- Bike Parking
- Bike Locker
- Uniform Wayfinding and Security Signage
- CCTV
- Safety Bollards
- Pathway Resurfacing
- New Striping
- New Ped & Bike Scaled Lighting
- Ped & Bike Scaled LED Lighting Bulb Replacement

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Exhibit B – Orange Line Bike Path Improvements Comparative Analysis

Orange Line Bike Path Improvements Comparative Analysis

The purpose of the analysis is to evaluate and quantify the benefits and costs related to the user impacts of the proposed Tier 1 and Tier 2 bike path improvements outlined in the change of scope for the Orange Line improvement project. The results of the analysis would then be compared to the benefits and costs associated with the elevated bike path included in original scope of work. The CAL B/C Active Transportation Model version 7.2 was used to calculate and monetize the benefits and costs associated with each analysis scenario, in accordance with best practices.

Analysis Parameters

The parameters of the analysis define how and whom the proposed improvements will impact, based on the location and characteristics of the proposed improvements and the area in which they're implemented. The analysis evaluates these impacts based on two distinct geographical areas: the linear size of the bicycle facility ("Project Area Length") and the user catchment area ("Analysis Area") defined as a one-mile buffer zone around the bicycle facility. The Project Area Length helps determine the travel characteristics of the facility, including average travel speed, travel time and distance, while the Analysis Area indicates the existing and potential user base for the facility, which helps estimate the safety benefits for local users shifting from parallel routes near the facility.

The assumptions underlying the analysis are outlined below:

- The construction of the project occurs in the year 2023 with operations from 2024 to 2043;
- The traffic on the facility is a mix of regional users and local users from within the project area. While all users of the proposed facilities will experience the benefits of reduced travel time and health improvements, the safety benefits are measured only for local users from within the Analysis Area;
- The facility improvements are expected to experience continued growth in existing users and induced demand by new users from within the project area in all three scenarios, as compared to a baseline scenario without any improvements;
- The facility improvements are expected to attract a percent of existing users from within the Analysis Area to shift from traveling on the roadway to using the protected bike path, resulting in benefits to safety, travel time and journey quality;
- The total length of the proposed scope change improvements to the Orange Line Bike Path facility stretches from Chatsworth Station to Valley College Station for a total length of 14 miles. The proposed project improvements for each scenario are distributed throughout the length of the facility; the Project Facility Length for each scenario is determined by the type, location and overlap of these improvements and therefore may not be equal to the entire length of the project area. As a result, these parameters affect the estimate of existing and new users and the calculation of the safety, travel time and health benefits for each scenario differently.
- For Tier 1 Improvements and the Elevated Bike Path, the Project Facility Length consists of the segment of the bike path from Sepulveda Station to Van Nuys Station for a total length of 1.2 miles. In the combined Tier 1 and Tier 2 Improvements scenario, the analysis is for the Project Facility Length between the intersection with Roscoe Boulevard and the intersection with Woodman Avenue for a total length of 11.6 miles. The Analysis Area includes a one-mile buffer area around the Project Facility Length in all scenarios to calculate the existing and potential

users of the proposed improvements. The dimensions of the areas under evaluation in the analysis are shown in the table below.

Table 1. Dimensions of the Project Area and Analysis Area for Each Scenario

	Project Facility Length	**Analysis Area**
Elevated Bike Path	1.2 miles	2.4 sq. miles
Tier 1 Improvements Only	1.2 miles	2.4 sq. miles
Tier 1 and Tier 2 Improvements	11.6 miles	23.2 sq. miles

Forecasted Trips

The number of baseline trips differ for each scenario due to differences in their total catchment area for local and regional users. The Baseline Annual Growth Rate represents the historical population growth rate throughout the project area under current conditions; the Scenario Annual Growth Rate includes the Baseline Annual Growth Rate and the additional growth by induced demand. The initial bump in trips related to the induced demand for the improved facilities has been spread across the 20-year operations period to provide a more constant growth in trips. The improved facilities under each scenario are expected to improve connectivity to the regional multimodal network, improving access for local users and regional users traveling through the project area. The breakdown of baseline daily trips and annual growth rate in users for each scenario is shown below.

Table 2. Baseline Total Daily Trips and Growth Rate Under Baseline and Scenario Conditions

	Current Total Daily Trips	***Baseline Annual Growth Rate***	***Scenario Annual Growth Rate***
Elevated Bike Path	888	1.0%	3.0%
Tier 1 Improvements Only	888	1.0%	3.0%
Tier 1 and Tier 2 Improvements	2,371	1.0%	3.0%

Overview of Cost Estimates

Please see below for an overview of approximate capital costs associated with each scenario:

Table 3. Project Costs By Scenario

	Estimated Total Cost ($2020, undiscounted)	***Estimated Total Cost ($2016, undiscounted)***
Elevated Bike Path	$20,000,000	$18,610,000
Tier 1 Improvements Only	$4,500,000	$4,187,000
Tier 1 and Tier 2 Improvements	$8,154,000	$7,679,000

Overview of Benefits

- ***Safety:*** Within each Analysis Area, approximately 30 percent of total vehicle-bicycle collisions occurred are intersections. The proportion of the bicyclist population involved in a collision at an

intersection within the Analysis Area are expected to use the protected bike path in the future, resulting in fewer collisions between vehicles and bicyclists. The installation of a shared bicycle-pedestrian path has been shown to reduce crashes by 25 percent for new users; assuming 30 percent of bicyclists involved in a collision within the Analysis Area would experience the marginal benefit of the proposed Tier 1 and Tier 2 improvements for the first time, the change is expected to result in an approximately 10 percent decrease in the historical average number of injuries experienced by all bicyclists within the project area.

Similar to the Tier 1 and Tier 2 improvements, the construction of the elevated bike path is expected to attract existing users in the project area to use the protected bike path. However, based on previous studies, user injuries are expected to increase by 9 percent due to the increased risk for users to become involved in solo crashes and conflicts with other users related to descending the elevated bike path at high speeds. Users will continue to have the option to use the existing at-grade path but will be required to wait at the intersections between Van Nuys Boulevard and Sepulveda Boulevard, negating their travel time savings.

Table 4. Crash Statistics by Scenario

	Elevated Bike Path	**Tier 1 Improvements Only**	**Tier 1 and Tier 2 Improvements**
Total Bicyclist Collisions in Analysis Area	183	183	540
Total Bicyclist Collisions at Intersections in Analysis Area	55	55	162
Total Bicyclist Collisions at Intersections in Analysis Area Per Year	11	11	32.4
Total Avoided Bicyclist Collisions in Analysis Area per Year	(0.8)	1.1	3.2

- ***Health Improvements:*** In all three scenarios, existing users and new users will benefit from the health improvements related to bicycling. These health improvements occur in users choosing to use their bicycle to travel, as opposed to using a car or not taking the trip, which results from increased access to bicycle facilities. The health benefits include long-term improvements in cardiovascular health and avoided mortality.
- ***Travel Time Savings:*** In all three scenarios, existing and new users will benefit from higher travel speeds related to the improved condition of the path, while users under the Elevated Bike Path scenario will avoid waiting times at intersections in their project segment. For users under the Tier 1 Only and Combined Tier 1 and Tier 2 scenario, there may be a latent benefit of avoided delay at intersections related to the bus lane improvements, but those have not been included in the analysis. On average, users are expected to experience improvements in travel speeds of approximately 30 percent, from 12 MPH to 15 MPH, as a result of the improved segregation of pedestrian and bicyclist traffic on the bike path and the improved surface condition of the bike path. These would result in average travel time savings of 4 minutes per trip under the Elevated Bike Path, 1.5 minutes per trip with the Tier 1 Improvements Only scenario, and 11.5 minutes under the combined Tier 1 and Tier 2 Improvements scenario.

Table 5. Changes from Baseline Conditions for Each Scenario

	Elevated Bike Path	**Tier 1 Improvements Only**	**Tier 1 and Tier 2 Improvements**
Average Travel Time Savings per Trip	4 Minutes	1.5 Minutes	11.5 Minutes
Change in Crashes Resulting in Injuries	Increase by 0.8 per Year	Decrease by 1.1 per Year	Decrease by 3.2 per Year
Access for Disadvantaged Communities	25,250 Residents	21,042 Residents	73,621 Residents

Results

Please see below a comparison table with the results for each scenario in discounted 2016 dollars:

	Elevated Bike Path	**Tier 1 Improvements Only**	**Tier 1 and Tier 2 Improvements**
Total Net Benefits	$8.7 million	$9.3 million	$24.4 million
Travel Time Savings	$5.8 million	$2.2 million	$4.6 million
Safety Benefits	($1.9 million)	$2.4 million	$7.0 million
Health Benefits	$4.8 million	$4.8 million	$12.8 million
Total Capital Costs	$18.6 million	$4.2 million	$7.7 million
Benefit-Cost Ratio	0.5	2.2	3.2

Sources

Bicycle Counts

- SCAG Active Transportation Database, https://maps.scag.ca.gov/atdb/
- US Census Bureau, Commuter Characteristics of Population, https://www.census.gov/topics/employment/commuting.html
- Alliance for Biking and Walking: Bicycling and Walking in the United States - 2018 Benchmarking Report, https://bikeleague.org/benchmarking-report
- NCHRP Guidelines for Analysis of Investments in Bicycle Facilities, 2006, http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_552.pdf

Safety Benefits

- Alluri, Priyanka, Md Asif Raihan, Dibakar Saha, Wanyang Wu, Armana Huq, Sajidur Nafis, and Albert Gan. "Statewide Analysis of Bicycle Crashes." Florida Department of Transportation (May 2017), http://www.cmfclearinghouse.org/study_detail.cfm?stid=515
- Elvik, R. and Vaa, T., "Handbook of Road Safety Measures." Oxford, United Kingdom, Elsevier, (2004), http://www.cmfclearinghouse.org/study_detail.cfm?stid=14

Travel Delay

- LA Metro Orange Line Improvements 2018 LPP Grant Application
- Bernardi, S. and Rupi, F. “An analysis of bicycle travel speed and disturbances on -off-street and on-street facilities.” Transportation Research Procedia (2015), https://core.ac.uk/download/pdf/82484444.pdf

Local Partnership Program
Benefits Forms

Project Information	
Project Title: Metro Orange Line Bus Rapid Transit Improvements	Date: 10/27/21
Project Identifier (EA, PPNO, etc): 5504	

Contact Information	
Nominating Agency: Los Angeles County Metropolitan Transportation Authority	Agency Completing Form: Los Angeles County Metropolitan Transportation Authority
Contact Person: Fulgene Asuncion Phone: 213-922-3025	Contact Person: Nela De Castro Phone: 213-922-6166
Email Address: asuncionf@metro.net	Email Address: decastrom@metro.net

LPP Indicator	Suggested Measures/Outcomes	Unit	Current	Projected	
				Outcome	Year
Throughput	Average Peak Period Vehicle Trips	Time	N/A		
	Average Daily Vehicle Trips (ADT)	Each	N/A		
	Reduction in Daily Vehicle Hours of Delay	Hours	N/A		
	Daily VMT per capita	Each	505,675,408	505,593,652	2025
	Average Peak Period Vehicle Trips Multiplied by the Occupancy Rate	Each	N/A		
	Average Daily Vehicle Trips Multiplied by the Occupancy Rate	Each	N/A		
	Passengers per Vehicle Revenue Hour (weekday daily passengers/weekday revenue hours)	Hours	60	86	2025
	Passengers per Vehicle Revenue Mile (weekday daily passengers/weekday revenue miles	Miles	4	5	2025
	Passenger Mile per Train Mile (Intercity Rail)	Miles	N/A		
	Boardings per capita (weekday daily passengers)	Each	23,760	33,860	2025
	Other				
	In the space below, qualitatively explain the assumptions and methodologies used for proposed throughput outcomes. If another measure(s) is entered under "Other", describe the measure and why other suggested measure(s) were not used.				
	Current and projected throughput estimates are based on the Metro Orange Line 2017 Technical Study.				
Safety	Fatalities per Vehicle Miles Traveled (VMT) and per capita	Each	N/A		
	Fatal Collisions per VMT and per capita	Each	N/A		
	Injury Collisions per VMT and per capita	Each	N/A		
	Other - Average monthly red light violations crossing the busway	Each	5,000-6,000	0	2025
	In the space below, qualitatively explain the assumptions and methodologies used for proposed safety outcomes. If another measure(s) is entered under "Other", describe the measure and why other suggested measure(s) were not used.				
	Suggested measures are more appropriate for highway-type projects. The project seeks to reduce/eliminate red light violations that cause intrusions into the Metro Orange Line busway and create conflict between buses, vehicles, and bicyclists/pedestrians. The physical barriers (quadrant gates) and grade separations to be implemented by the project are expected to greatly reduce these conflicts.				
Accessibility	Percentage of population within 1/2 mile of a rail station or bus route.	Percent	N/A		
	Average travel time to jobs or school.	Time	N/A		
	Other	Each			
	In the space below, qualitatively explain the assumptions and methodologies used for proposed accessibility outcomes. If another measure(s) is entered under "Other", describe the measure and why other suggested measure(s) were not used.				
	The project itself is not expected to lead to change in percentage of population living within a half mile of the bus route. Average travel time along the busway is expected to be reduced as a result of the project as indicated in outcomes reported elsewhere on this form.				
Economic Development	Jobs created	Each	N/A	3,230	2025
	Benefit/Cost Ratio	Ratio		1.7	2025
	Other				
	In the space below, qualitatively explain the assumptions and methodologies used for proposed economic development outcomes. If another measure(s) is entered under "Other", describe the measure and why other suggested measure(s) were not used.				
	Benefit/Cost Ratio was calculated using the Caltrans Benefit/Cost Analysis Model Version 6.2..				

Local Partnership Program
Benefits Forms

Air Quality and Greenhouse Gas Reductions	Reduction in Particulate Matter (PM2.5)	Tons per year		-	2025
	Reduction in Particulate Matter (PM10)	Tons per year		-	2025
	Reduction in Carbon Dioxide (CO2)	Tons per year		11,968	2025
	Reduction in Volatile Organize Compounds (VOC)	Tons per year		2	2025
	Reduction in Sulphur Oxides (SOx)	Tons per year		-	2025
	Reduction in Carbon Monoxide (CO)	Tons per year		40	2025
	Reduction in Nitrogen Oxide (NOx)	Tons per year		3	2025
	In the space below, qualitatively explain the assumptions and methodologies used for proposed emissions reduction outcomes.				
	Emissions reductions were calculated using the Caltrans Benefit/Cost Analysis Model Version 6.2.				
System Preservation	Pavement lane miles	Miles	N/A		
	Condition of pavement - percentage	Percent	N/A		
	Condition of bridge - percentage	Percent	N/A		
	Other				
	In the space below, qualitatively explain the assumptions and methodologies used for proposed System Preservation outcomes. If another measure(s) is entered under "Other", describe the measure and why other suggested measure(s) were not used.				
	The suggested measures are not applicable to this transit project.				
Reliability	Travel Time Variability (buffer index) (Total average red light delay)	Minutes	8	0	2025
	Daily vehicle hours of delay per capita	Hours	N/A		
	Daily congested highway VMT per capita	Each	N/A		
	Other				
	In the space below, qualitatively explain the assumptions and methodologies used for proposed Reliability outcomes. If another measure(s) is entered under "Other", describe the measure and why other suggested measure(s) were not used.				
	Current average delay at red lights is based on the Metro Orange Line 2017 Technical Study. Gating and grade separations implemented by the project will reduce red light delay by facilitating bus crossings through roadway intersections.				
Mobility	Passenger Hours of Delay / Year	Hours	N/A		
	Average Peak Period Travel Time	Time	55	39	2025
	Average Non-Peak Period Travel Time	Time	N/A		
	Other - Average busway corridor speed	Miles per hour	20	30	2025
	In the space below, qualitatively explain the assumptions and methodologies used for proposed Mobility outcomes. If another measure(s) is entered under "Other", describe the measure and why other suggested measure(s) were not used.				
	Current and projected travel time/delay estimates are based on Metro Orange Line 2017 Technical Study and updated 2018 analysis.				

DEPARTMENT OF TRANSPORTATION
DISTRICT 7- OFFICE OF REGIONAL PLANNING
100 S. MAIN STREET, SUITE 100
LOS ANGELES, CA 90012
PHONE (213) 265-0362
FAX (213) 897-1337
TTY 711
www.dot.ca.gov

Making Conservation a California Way of Life.

November 3, 2021

Angel Pyle
SB 1 Program Manager
Caltrans
1120 "N" Street
Sacramento, CA 95814

RE: District Approval – Metro Orange (G) Line Bus Rapid Transit Improvements Scope Amendment

Dear Ms. Pyle:

The Los Angeles Metropolitan Transportation Authority (LA Metro) has submitted a request to amend the scope of the Metro Orange (G) Line Bus Rapid Transit Improvements project. The proposed scope change would replace the adjacent grade separated bicycle/pedestrian overcrossing bridges that run parallel to the Sepulveda and Van Nuys grade separations with at-grade bicycle and pedestrian improvements along 14 miles of existing multiuse path from Chatsworth to Valley College Stations.

LA Metro has concluded, after additional analysis findings from first/last mile planning for the Van Nuys and Sepulveda stations, and through stakeholder concerns received through those processes, it was determined that the closure of Tyrone Avenue and grade separation over the City of Los Angeles' Bureau of Street Services Private Crossing were not required.

The project will still address efficiency and safety along the G Line corridor. The amended project description is as follows: In Los Angeles County on the LA Metro Orange (G) Line between North Hollywood and Chatsworth Station, Bus Rapid Transit (BRT) Improvements will be constructed. The scope includes construction of separated structures that elevate the busway and associated BRT stations at Van Nuys and Sepulveda Blvds. The aerial structure at Van Nuys Blvd. also spans over Vesper Ave. The project includes installation of railroad-style four-quadrant gate systems at 35 crossings along the Metro Orange Line (G) and at-grade bicycle and pedestrian improvements along 114 miles of existing multiuse path from Chatsworth to Valley College Stations.

The benefits of the scope amendment have also increased. The scope amendment provides a higher safety benefit, and direct and accessible connections for pedestrians/bicyclists to more destinations and serves the disadvantaged communities along the entire Metro G Line. The proposed scope results in a benefit cost ratio of 3.2, with net monetized benefits totaling $24.4 million. This is nearly three times higher than the net benefits provided by the existing scope. The proposed scope provides greater benefits mainly in the areas of safety and health. In addition, the proposed change will make the path more convenient and comfortable to use which will encourage more users. This will yield health benefits through increased active transportation and reduced automobile use and related pollution and emissions.

The proposed scope change is not impacting the milestone schedule on its own. The schedule revisions are due to the change in the project delivery method of the main construction contract. Upon completion of a project delivery evaluation process, Metro determined a Progressive Design Build (PDB) delivery method is appropriate for the project.

Utilizing the PDB delivery method will provide for the efficient management of risks, the selection of a qualified contractor to deliver a complex project, and the optimization of interface management between internal Metro departments, other projects, and third-party stakeholders. Metro Board approved this new project delivery at the March 2021 Board meeting. Metro is actively developing the contract and solicitation package targeting for Winter 2022 release.

After reviewing all pertaining documents, the Caltrans District 7 Transit Branch supports the scope change amendment. If you have any questions, please Mr. Carlo Ramirez, at carlo.ramirez@dot.ca.gov.

Sincerely,

Miya Edmonson

MIYA EDMONSON
IGR/CEQA –Transit Branch Chief

State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

MEMORANDUM

TAB 82

To: CHAIR AND COMMISSIONERS
CALIFORNIA TRANSPORTATION COMMISSION

CTC Meeting: December 4-5, 2019

From: STEVEN KECK, Chief Financial Officer

Reference Number: 4.17, Action Item ***PINK REPLACEMENT ITEM***

Prepared By: Ronald E. Sheppard, Chief (Acting)
Division of Rail and Mass Transportation

Subject: **LOCAL PARTERSHIP PROGRAM – SCOPE CHANGE AMENDMENT FOR THE METRO ORANGE LINE BUS RAPID TRANSIT IMPROVEMENT PROJECT RESOLUTION LPP-1920-02.**

ISSUE:

Should the California Transportation Commission (Commission) approve the Los Angeles County Metropolitan Transportation Authority's (LA Metro) request to amend the Metro Orange Line Bus Rapid Transit Improvements project (PPNO 5504) scope, programmed in the 2018 Local Partnership Competitive Program in Cycle 1?

RECOMMENDATION:

The California Department of Transportation (Department) recommends the Commission approve the request to amend the Metro Orange Line Bus Rapid Transit Improvements scope, programmed in the Cycle 1 2018 Local Partnership Competitive Program.

BACKGROUND:

On May 16, 2018, the Metro Orange Line Bus Rapid Transit Improvements project was adopted in the 2018 Local Partnership Competitive Program under Cycle 1. The project was programmed for $75,000,000 of Local Partnership Program Competitive funds for the construction phase. The project was selected from 90 project applications seeking in excess of over $900 million from the Local Partnership Program.

The original scope would have constructed a single aerial grade separation spanning over five intersections, constructed four-quadrant gate systems at 34 intersections along a 18-mile segment and elevated an existing bike path. On May 24, 2019, LA Metro submitted a scope change request for the Metro Orange Line Bus Rapid Transit Improvements project

(PPNO 5504). The proposed scope change will construct two separate aerial structures spanning over four intersections and one additional four-quadrant gate crossing in between the two aerial structures.

The proposed scope change is more cost-effective and an efficient design that will provide connectivity enhancements with other planned projects in the area; East San Fernando Valley Transit Corridor and Sepulveda Pass projects.

The Department and Commission staff discussed the proposed scope change and worked with LA Metro to resolve any questions and concerns regarding the request.

The Local Partnership Competitive Program provides discretionary funding for projects that excel through an evaluation process. And although the initial project was evaluated and scored based on the scope of work and project benefits, the proposed project scope change would have scored similarly to the initial project scope, because there are no changes to the benefits.

After thorough review and analysis of the scope change, and in consultation with Commission staff, the Department has determined that although the project design will change, there are no impacts to the project benefits. Therefore, the Department recommends Commission approval of the scope change.

Attachment:

- Attachment A: Department Analysis and Recommendations

Project Scope Change Request

ATTACHMENT 7

Caltrans' Analysis and Recommendations

August 12, 2019

PROJECT NAME: Metro Orange Line Bus Rapid Transit Improvements
IMPLEMENTING AGENCY: LA County Metropolitan Transportation Authority (LA Metro)
PPNO: 5504
DATE OF AGENCY/CT COORDINATION MEETING: June 19 & July 8, 2019

APPROVED PROJECT DESCRIPTION (SCOPE): In Los Angeles County on the Metro Orange Line (MOL) route between the North Hollywood Station and Chatsworth Station, Bus Rapid Transit (BRT) improvements will be constructed. Construct one aerial grade-separated structure over five intersections (Van Nuys Boulevard, Vesper Avenue, Kester Avenue, City of LA Driveway, Sepulveda Boulevard, from Tyrone Avenue to Sepulveda Boulevard, with railroad type four quadrant gating systems at 34 intersections along a 18-mile segment of the MOL. Also, elevate existing bike path between Van Nuys and Sepulveda Boulevards to further enhance safety for bicyclists and pedestrian (Design-Build method).

NEW PROJECT DESCRIPTION (SCOPE): In Los Angeles County on the MOL route between the North Hollywood Station and Chatsworth Station, BRT improvements will be constructed. The scope includes construction of aerial grade separated structures that would elevate the busway and associated BRTstations at Van Nuys and Sepulveda Blvds. The aerial structure at Sepulveda spans over the city of Los Angeles' Bureau of Street Services Private Crossing, east of the Sepulveda grade separation, and returns to an at-grade alignment at Kester Blvd. The aerial structure at Van Nuys Blvd. also spans over Vesper Ave. and requires the closure of Tyrone Avenue, east of Van Nuys Blvd. An adjacent grade separated bicycle/pedestrian overcrossing that runs parallel to the Sepulveda and Van Nuys grade separations will also be constructed. The Project also includes installation of railroad-type gate systems at 35 MOL crossings along the MOL.

(New scope attached, revised PPR, Exhibit B).

Purpose

This document serves as supplemental information to the SCOPE CHANGE AMENDMENT REQUEST (attached) completed by LA Metro and submitted to Caltrans on August 8, 2019. *(Local Agency Letter attached, exhibit A)*

Caltrans' Recommendation(s)

As a result of Caltrans' review of the LA Metro's Scope Change Request documentation and subsequent discussion(s) with CTC and LA Metro staff, Caltrans recommends the following action:

APPROVE AS A MINOR SCOPE CHANGE

Scope to Be Changed

The following is a numbered list of proposed scope changes:

1. The scope change altered a busway grade separation from one bridge spanning over five intersections to two smaller bridges spanning over four intersections, adding a quadrant gate to an intersection in the middle of the five intersections, that was to be a grade separation in the original design.

Reason for the Scope Change

The reason given was that a new design was more cost-effective and efficient. The proposed modification reduced the cost of the project by 11 percent, without impacting operational benefits in travel time savings.

Summary of Caltrans Analysis

Caltrans supports this request for the following reasons:

As the circumstances surrounding the scope change were unforeseen at the time of application, and the benefits of the project are nearly the same after the design change, the California Department of Transportation recommends the California Transportation Commission approve the change in scope for the Metro Orange Line Bus Rapid Transit Improvement Project.

Proposed scope change affect to benefits:

Table 3. Original Benefit/Cost Analysis

INVESTMENT ANALYSIS
SUMMARY RESULTS

Life-Cycle Costs (mil. $)	$236.2
Life-Cycle Benefits (mil. $)	$357.5
Net Present Value (mil. $)	$119.4
Benefit / Cost Ratio:	1.50
Rate of Return on Investment:	8.0%
Payback Period:	9 years

ITEMIZED BENEFITS (mil. $)	Passenger Benefits	Freight Benefits	Total Over 20 Years	Average Annual
Travel Time Savings	$173.7	$0.0	$173.7	$8.7
Veh. Op. Cost Savings	$121.0	$0.0	$121.0	$6.1
Accident Cost Savings	$52.5	$0.0	$52.5	$2.6
Emission Cost Savings	$10.3	$0.0	$10.3	$0.5
TOTAL BENEFITS	$357.5	$0.0	$357.5	$17.9
Person-Hours of Time Saved			32,868,986	1,644,449

Should benefit-cost results include:

1) Induced Travel? (y/n)	Y (Default = Y)
2) Vehicle Operating Costs? (y/n)	Y (Default = Y)
3) Accident Costs? (y/n)	Y (Default = Y)
4) Vehicle Emissions? (y/n) includes value for CO_2e	Y (Default = Y)

EMISSIONS REDUCTION	Tons: Total Over 20 Years	Tons: Average Annual	Value ($mil.): Total Over 20 Years	Value ($mil.): Average Annual
CO Emissions Saved	800	40	$0.1	$0.0
CO_2 Emissions Saved	238,371	11,919	$6.8	$0.3
NO_x Emissions Saved	65	3	$2.6	$0.1
PM_{10} Emissions Saved	2	0	$0.5	$0.0
$PM_{2.5}$ Emissions Saved	2	0		
SO_x Emissions Saved	2	0	$0.3	$0.0
VOC Emissions Saved	42	2	$0.1	$0.0

Table 4. Revised Benefit/Cost Analysis for Scope Change

INVESTMENT ANALYSIS
SUMMARY RESULTS

Life-Cycle Costs (mil. $)	$238.2
Life-Cycle Benefits (mil. $)	$404.3
Net Present Value (mil. $)	$166.1
Benefit / Cost Ratio:	1.7
Rate of Return on Investment:	9.3%
Payback Period:	6 years

ITEMIZED BENEFITS (mil. $)	Passenger Benefits	Freight Benefits	Total Over 20 Years	Average Annual
Travel Time Savings	$220.4	$0.0	$220.4	$11.0
Veh. Op. Cost Savings	$121.0	$0.0	$121.0	$6.1
Accident Cost Savings	$52.5	$0.0	$52.5	$2.6
Emission Cost Savings	$10.3	$0.0	$10.3	$0.5
TOTAL BENEFITS	$404.3	$0.0	$404.3	$20.2
Person-Hours of Time Saved			39,263,878	1,963,194

Should benefit-cost results include:

1) Induced Travel? (y/n)	Y (Default = Y)
2) Vehicle Operating Costs? (y/n)	Y (Default = Y)
3) Accident Costs? (y/n)	Y (Default = Y)
4) Vehicle Emissions? (y/n) includes value for CO_2e	Y (Default = Y)

EMISSIONS REDUCTION	Tons: Total Over 20 Years	Tons: Average Annual	Value ($mil.): Total Over 20 Years	Value ($mil.): Average Annual
CO Emissions Saved	800	40	$0.1	$0.0
CO_2 Emissions Saved	238,371	11,919	$6.8	$0.3
NO_x Emissions Saved	65	3	$2.6	$0.1
PM_{10} Emissions Saved	2	0	$0.5	$0.0
$PM_{2.5}$ Emissions Saved	2	0		
SO_x Emissions Saved	2	0	$0.3	$0.0
VOC Emissions Saved	42	2	$0.1	$0.0

Net Increase/No change/Net Decrease- The proposed scope change is expected to have minimal impact(s) on the project's potential as compared to the original scope.

Attachment B

Table 1. Comparison of Benefit/Cost Analysis Assumptions

Line #	Variable	Unit	Original Value* (from 2017 Analysis)	New Value (estimated from 2018 Analysis)
	Ridership Increase (also decrease in auto trips)	New MOL trips per day	10,100	No change
		New MOL trips per year	3,191,600	No change
1	MOL In-Vehicle Travel Time Change	Minutes per trip	North Hollywood to Canoga (12.7 miles) - 12.6	North Hollywood to Chatsworth (18 miles) - 16
	MOL Out-of-Vehicle Travel Time Change	Minutes per trip (Peak)	2	No change
		Minutes per trip (Off-Peak)	0	No change
1	Parallel Roadway Travel Time	Minutes per trip (bidirectional average)	North Hollywood to Canoga (12.7 miles) 42	North Hollywood to Chatsworth (18 miles) 54
	Trips during Peak Period	Percent	70%	No change
	Bus Vehicle Miles	Average weekday miles	6183.1	No change
		Average Saturday miles	3725.6	No change
		Average Sunday miles	3487.4	No change
		Annual total estimate	1,982,682	No change
	Change in Automobile VMT	Daily VMT change	- 81,756	No change
		Annual VMT change	- 25,834,896	No change
	Average automobile speed	Miles per hour	20	No change
3	Vehicles crossing gate quadrant streets	Number of daily vehicles	305,000	307,000 (with Kester)
		Number of annual vehicles	96,380,000	97,012,000
3	Vehicles crossing grade separation streets	Number of daily vehicles	45,000	43,000
		Number of annual vehicles	14,220,000	13,588,000
1-12	Change in average cross traffic delay for gate quadrants	Seconds of delay	7	12
	Change in average cross traffic delay for grade separations	Seconds of delay	- 5	No change

*Values shown in 2017 analysis represent the 12.7-mile E-W corridor (North Hollywood to Canoga).

Page 2 of 6

(See attached analysis/revised project report, Exhibit C)

Additional Comments

Caltrans concurs with the information provided in Attachment 1 – SCOPE CHANGE AMENDMENT REQUEST. The agency has coordinated with Caltrans staff to provide the most accurate information possible.

Caltrans' Coordination with Requesting Agency

Caltrans and CTC staff met with LA Metro several times to discuss the project between January and August 2019.

Impact to Project Cost

LA Metro has indicated that while the new design of the project reduces the cost by 11 percent, the cost of the project is estimated between $320 to $393 million. LA Metro is prepared to cover any increase to the cost of the project.

Impact to Project Schedule

There are two new schedules for the project, as there will be two contract awards; one contract for the grade separation and one contract for the gating systems. The project will be delayed by 17 months as indicated by the dates in the revised PPR (exhibit B).

4. PROJECT SCHEDULE:

GRADE SEPARATIONS:

Project Milestone	Existing	Proposed
Project Study Report Approved		
Begin Environmental (PA&ED) Phase	06/15/2018	
Circulate Draft Environmental Document — Document Type		07/26/18
Draft Project Report		
End Environmental Phase (PA&ED Milestone)	07/31/2018	08/27/18
Begin Design (PS&E) Phase		11/01/18
End Design Phase (Ready to List for Advertisement Milestone)		08/30/20
Begin Right of Way Phase	10/31/2018	11/01/18
End Right of Way Phase (Right of Way Certification Milestone)	03/31/2020	06/30/21
Begin Construction Phase (Contract Award Milestone)	03/31/2020	05/01/21
End Construction Phase (Construction Contract Acceptance Milestone)	08/31/2023	02/28/25
Begin Closeout Phase	10/31/2023	03/01/25
End Closeout Phase (Closeout Report)	12/31/2024	12/31/25

GATES:

Project Milestone	Existing	Proposed
Project Study Report Approved		
Begin Environmental (PA&ED) Phase	06/15/2018	
Circulate Draft Environmental Document — Document Type		07/26/18
Draft Project Report		
End Environmental Phase (PA&ED Milestone)	07/31/2018	08/27/18
Begin Design (PS&E) Phase		11/01/18
End Design Phase (Ready to List for Advertisement Milestone)		02/28/21
Begin Right of Way Phase	10/31/2018	06/01/19
End Right of Way Phase (Right of Way Certification Milestone)	03/31/2020	06/30/21
Begin Construction Phase (Contract Award Milestone)	03/31/2020	03/01/22
End Construction Phase (Construction Contract Acceptance Milestone)	08/31/2023	02/28/25
Begin Closeout Phase	10/31/2023	03/01/25
End Closeout Phase (Closeout Report)	12/31/2024	12/31/25

ATTACHMENTS – Scope Change Amendment Request

1. Exhibit A, Local Agency Letter
2. Exhibit B, Revised Project Programming Request
3. Exhibit C, Analysis/Revised Project Report
4. Exhibit D, Caltrans Recommendation

ROAD REPAIR & ACCOUNTBILITY ACT OF 2017
LOCAL PARTNERSHIP COMPETITIVE PROGRAM
SCOPE CHANGE AMENDMENT REQUEST
METRO ORANGE LINE BUS RAPID TRANSIT IMPROVEMENTS

Exhibit A
LOCAL AGENCY
LETTER

Los Angeles County
Metropolitan Transportation Authority

One Gateway Plaza
Los Angeles, CA 90012-2952

213.922.2000 Tel
metro.net

Metro

August 8, 2019

Ms. Susan Bransen
Executive Director
California Transportation Commission
1120 "N" Street, MS 52
Sacramento, CA 95814

Attention: Angel Pyle, Caltrans

PROPOSED PROJECT SCOPE & SCHEDULE MODIFICATION FOR METRO ORANGE LINE BUS RAPID TRANSIT IMPROVEMENTS PROJECT
Local Partnership Program, Competitive Program Funding

Dear Ms. Bransen:

The Los Angeles County Metropolitan Transportation Authority (Metro) hereby submits its request for approval of a scope modification for the Metro Orange Line (MOL) Bus Rapid Transit (BRT) Improvements project. The project was awarded a $75,000,000 2018 Local Partnership Program – Competitive (LPP-C) grant award.

Proposed Scope Modification
The project scope as described in the original grant application consisted of constructing improvements along the 18-mile MOL Busway. The proposed 18-mile improvement project included a single one-mile aerial BRT and bike path grade separation spanning Sepulveda to Van Nuys Boulevards and railroad-type gating at 34 at-grade crossings along the entire 18-mile line. However, a more cost-effective and efficient design now includes separate aerial structures at each of these two crossings with one additional gated crossing in between. The proposed modification in scope reduced the project cost by approximately 11% without impacting the operational benefits in travel time savings. The cost reduction for the grade separation is needed to accommodate a revised cost estimate for the railroad-type gates that is higher than originally projected. This design direction came from evaluation of various configurations of aerial stations including connectivity with the East San Fernando Valley Transit Corridor and Sepulveda Pass projects. Attachment A presents the report approved by the Metro Board that describes the proposed scope as the conceptual project description.

Benefit/Cost Analysis Comparison
Metro staff prepared a comprehensive updated Benefit/Cost Analysis (BCA) using the Caltrans BCA model to compare the impacts of the original scope and proposed scope amendment (Attachment B). The results found that the BCA ratio improved from 1.5 to 1.7 when incorporating the impacts of the proposed scope modification. The new assumptions and BCA results for the proposed scope reflect not only the scope change, but also improved understanding of and data for the entire project.

The results of the updated BCA found no change in most variables between the original and proposed scope change. The variables that did show change originated from a different model. The original scope, methodology, assumptions and model approach were informed only by conceptual design. The BCA analysis for the proposed scope incorporated improved information for the project.

Schedule

We are enclosing the revised project programming requests (PPRs) to update the project scope of work, outputs/outcomes and milestone schedule. The schedule revisions are due to the delay of the main construction contract which is currently projected to be awarded in August 2021 which is inconsistent with the year LPP-C funds are programmed(FY2019/20). We understand from previous discussions with Caltrans staff that an extension request will need to be submitted in FY20 to accommodate this schedule change which is needed to accommodate better integration with the East San Fernando Valley Transit Corridor Project. We are expecting to complete the preliminary engineering (P/E) for the Sepulveda grade separation by summer 2019. The P/E on the Van Nuys grade separation will follow the P/E for Sepulveda in order to coordinate with the connecting East San Fernand Valley Transit Corridor Light Rail Station on Van Nuys Boulevard. We plan to include both grade separations in one contract, but we will evaluate the procurement strategy and may consider issuing a separate contract for each aerial structure. While the main construction contract is scheduled to begin in Fall of 2021, utility relocation and site work will commence as originally planned in FY20.

Budget

A preliminary rough order of magnitude (ROM) cost estimate of the recommended project, based on conceptual designs, currently ranges from $320 to $393 million. A refined cost estimate will be determined after completion of the preliminary engineering of the gated intersections and the grade separations. The project's funding plan currently includes $245.3 million in Measure M and $75 million in SB-1 Local Partnership Program (LPP) grant funds. Metro is committed to secure funds for any additional project costs above current programmed revenues.

To assist you in reviewing our request, we have attached a scope comparison table , project maps (original & revised scope) and revised PPRs (Attachment C) . We thank you for considering the modifications to our project scope. If you have any further questions, please contact me at (213) 922-2822 or Nela De Castro at (213) 922-6166.

Sincerely,

Cosett P. Stark

COSETTE P. STARK
Deputy Executive Officer
Grants Management and Oversight

Attachments

cc: Patrick Olsen, Scott Kingsbury, Arthur Murray, HQ

ROAD REPAIR & ACCOUNTBILITY ACT OF 2017
LOCAL PARTNERSHIP COMPETITIVE PROGRAM
SCOPE CHANGE AMENDMENT REQUEST
METRO ORANGE LINE BUS RAPID TRANSIT IMPROVEMENTS

Exhibit B
REVISED PROJECT PROGRAMMING REQUEST

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST

DTP-0001 (Revised Mar, 1 2018 v7.08)

ATTACHMENT 7

General Instructions

Amendment (Existing Project) Yes					Date: 01/07/19	
District	**EA**	**Project ID**	**PPNO**	**MPO ID**	**Alt Proj. ID / prg.**	
07			5504			

County	**Route/Corridor**	**PM Bk**	**PM Ahd**	**Project Sponsor/Lead Agency**	
LA				Los Angeles County Metropolitan Transportation Authority	
				MPO	**Element**
				SCAG	MT

Project Manager/Contact	**Phone**	**E-mail Address**
Fulgene Asuncion	(213)922-3025	asuncionf@metro.net

Project Title

Metro Orange Line Bus Rapid Transit Improvements

Location (Project Limits), Description (Scope of Work)

Amended - Gates: In Los Angeles County on the Metro Orange Line (MOL) between the North Hollywood Station & Chatsworth Station, BRT improvements will be constructed. The scope includes construction of aerial grade separated structures that elevate the busway and associated BRT stations at Van Nuys & Sepulveda Blvds. The aerial structure at Sepulveda spans over the City of Los Angeles' Bureau of Street Services Private Crossing, east of the Sepulveda grade separation, & returns to an at-grade alignment at Kester Blvd. The aerial structure at Van Nuys Blvd. also spans over Vesper Ave. & requires closure of Tyrone Avenue, east of Van Nuys Blvd. An adjacent grade separated bike/ped overcrossing that runs parallel to the Sepulveda & Van Nuys grade separations will also be constructed. The Project includes installation of railroad-type gate systems at 35 crossings along the MOL.

Component	**Implementing Agency**
PA&ED	Los Angeles County Metropolitan Transportation Authority
PS&E	Los Angeles County Metropolitan Transportation Authority
Right of Way	Los Angeles County Metropolitan Transportation Authority
Construction	Los Angeles County Metropolitan Transportation Authority

Legislative Districts

Assembly:	45,46	**Senate:**	18,27	**Congressional:**	29,30

Project Benefits

The MOL is operating near capacity with standing passenger loads & very tight headways. To continue to meet demand, the project will provide gating & grade separation of the busway as an innovative, safe & cost-effective way to increase speed & thereby maximize roadway capacity. It will improve traffic flow, reduce traffic congestion in the community, improve transit operations & transit options for the community, which should reduce traffic collisions & greenhouse gas emissions. Ped/Bicycle Facilities miles constructed up to 1 mile.

Purpose and Need

The project will expand transit services, increase transit ridership, improve transit safety, enhance the access and convenience of the traveling public, and provide or facilitate a viable alternative to driving. Since the MOL is now at capacity with riders currently delayed by cross-traffic intrusions into the MOL busway, it is needed to improve operating speeds, ridership, capacity, schedule reliability and safety, while benefitting the surrounding community and ensuring cost effectiveness.

Category	**Outputs/Outcomes**	**Unit**	**Total**
Local streets and roads	Local road operational improvements	each	35

ADA Improvements No	Bike/Ped Improvements Yes	Reversible Lane analysis N
Inc. Sustainable Communities Strategy Goals Y	Reduces Greenhouse Gas Emissions Y	

Project Milestone	**Existing**	**Proposed**
Project Study Report Approved		
Begin Environmental (PA&ED) Phase	06/15/2018	
Circulate Draft Environmental Document **Document Type**		07/26/18
Draft Project Report		
End Environmental Phase (PA&ED Milestone)	07/31/2018	08/27/18
Begin Design (PS&E) Phase		11/01/18
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End Construction Phase (Construction Contract Acceptance Milestone)	08/31/2023	02/28/25
Begin Closeout Phase	10/31/2023	03/01/25
End Closeout Phase (Closeout Report)	12/31/2024	12/31/25

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STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

ATTACHMENT 7

PROJECT PROGRAMMING REQUEST

DTP-0001 (Revised Mar, 1 2018 v7.08)

Complete this page for amendments only

Date: 01/07/19

District	County	Route	EA	Project ID	PPNO	Alt. ID
07	LA				5504	

SECTION 1 - All Projects

Project Background

Programming Change Requested

Reason for Proposed Change

Previously, a single aerial grade separation spanning Van Nuys Boulevard to Sepulveda Boulevard was proposed, but based on conceptual design, a more cost-effective and efficient design now will include separate aerial structures at each of these two arterial street crossings.

If proposed change will delay one or more components, clearly explain 1) reason the delay, 2) cost increase related to the delay, and 3) how cost increase will be funded

Design of Van Nuys grade separation will start once the East San Fernando Valley Transit Corridor Project environmentally clears the scope for the terminal station connection at the Orange Line Van Nuys station. Also, the completion of real estate acquisitions will take longer than the initial anticipated completion date.

Other Significant Information

SECTION 2 - For SB1 Projects Only

Project Amendment Request (Please follow the individual SB1 program guidelines for specific criteria)

SECTION 3 - All Projects

Approvals

I hereby certify that the above information is complete and accurate and all approvals have been obtained for the processing of this amendment request.*

Name (Print or Type)	Signature	Title	Date
Cosette P, Stark	Cosette P. Stark	DEO, Grants Management & Oversight	8/8/2019

Attachments

1) Concurrence from Implementing Agency and/or Regional Transportation Planning Agency
2) Project Location Map

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST

DTP-0001 (Revised Mar, 1 2018 v7.08)

Date: 01/07/19

Additional Information

Emissions Reduction Savings from Caltrans Life-Cycle Benefit-Cost Analysis Model v6.2
(Tons over 20 years / Millions of dollars over 20 years)

CO - 800 / $0.1
CO2 - 238,371 / $6.8
NO x - 65 / $2.6
PM10 - 2 / $0.5
PM2.5 - 2
SO x - 2 / $0.3
VOC - 42 / $0.1

The latest operations and traffic analysis for the proposed scope change did not result in a change to the assumptions used to calculate the original emissions reduction figures. The emissions reductions are a result of ridership increases/mode shifts and VMT reduction produced by creating more free-flowing conditions on the Orange Line. The proposed scope change does not change the ability of the project to create more free-flowing conditions on the Orange Line. Therefore, GHG emissions reduction is not expected to change from the original project.

Environmental Document Type: Statutory Exemption: PRC 21080(b)(11)/CEQA Guidelines 15275(a) - 8/27/18

District	County	Route	EA	Project ID	PPNO	Alt. ID
07	LA, ,	, ,			5504	
Project Title:	Metro Orange Line Bus Rapid Transit Improvements					

Existing Total Project Cost ($1,000s)									
Component	Prior	18-19	19-20	20-21	21-22	22-23	23-24+	Total	Implementing Agency
E&P (PA&ED)	14,000							14,000	Los Angeles County Metropolitan
PS&E									Los Angeles County Metropolitan
R/W SUP (CT)									Los Angeles County Metropolitan
CON SUP (CT)									Los Angeles County Metropolitan
R/W		6,000						6,000	Los Angeles County Metropolitan
CON			295,300					295,300	Los Angeles County Metropolitan
TOTAL	14,000	6,000	295,300					315,300	
Proposed Total Project Cost ($1,000s)									**Notes**
E&P (PA&ED)	1,215	350						1,565	The original PPR has $320.3M as the total cost.
PS&E		2,500	9,500					12,000	
R/W SUP (CT)									
CON SUP (CT)									
R/W			1,000					1,000	
CON			65,435					65,435	
TOTAL	1,215	2,850	75,935					80,000	

Fund No. 1:	State SB1 LPP - Local Partnership Program - Competitive program (LPP-C)								Program Code
Existing Funding ($1,000s)									30.10.724.100
Component	Prior	18-19	19-20	20-21	21-22	22-23	23-24+	Total	Funding Agency
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON			75,000					75,000	
TOTAL			75,000					75,000	
Proposed Funding ($1,000s)									**Notes**
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									

Fund No. 2:	Local Funds - Local Transportation Funds (LTF)								Program Code
Existing Funding ($1,000s)									20.10.400.100
Component	Prior	18-19	19-20	20-21	21-22	22-23	23-24+	Total	Funding Agency
E&P (PA&ED)	14,000							14,000	
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W		6,000						6,000	
CON			220,300					220,300	
TOTAL	14,000	6,000	220,300					240,300	
Proposed Funding ($1,000s)									**Notes**
E&P (PA&ED)	1,215	350						1,565	
PS&E		2,500	9,500					12,000	
R/W SUP (CT)									
CON SUP (CT)									
R/W			1,000					1,000	
CON			65,435					65,435	
TOTAL	1,215	2,850	75,935					80,000	

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION
PROJECT PROGRAMMING REQUEST
DTP-0001 (Revised Mar, 1 2018 v7.08)

ATTACHMENT 7
General Instructions

Amendment (Existing Project) Yes					Date: 01/07/19	
District	**EA**	**Project ID**	**PPNO**	**MPO ID**	**Alt Proj. ID / prg.**	
07			5504			

County	**Route/Corridor**	**PM Bk**	**PM Ahd**	**Project Sponsor/Lead Agency**	
LA				Los Angeles County Metropolitan Transportation Authority	
				MPO	**Element**
				SCAG	MT

Project Manager/Contact	**Phone**	**E-mail Address**
Fulgene Asuncion	(213)922-3025	asuncionf@metro.net

Project Title

Metro Orange Line Bus Rapid Transit Improvements

Location (Project Limits), Description (Scope of Work)

Amended - Grade Separations: In Los Angeles County on the Metro Orange Line (MOL) between the North Hollywood Station & Chatsworth Station, BRT improvements will be constructed. The scope includes construction of aerial grade separated structures that elevate the busway and associated BRT stations at Van Nuys & Sepulveda Blvds. The aerial structure at Sepulveda spans over the City of Los Angeles' Bureau of Street Services Private Crossing, east of the Sepulveda grade separation, & returns to an at-grade alignment at Kester Blvd. The aerial structure at Van Nuys Blvd. also spans over Vesper Ave. & requires closure of Tyrone Avenue, east of Van Nuys Blvd. An adjacent grade separated bike/ped overcrossing that runs parallel to the Sepulveda & Van Nuys grade separations will also be constructed. The Project includes installation of railroad-type gate systems at 35 crossings along the MOL.

Component	**Implementing Agency**
PA&ED	Los Angeles County Metropolitan Transportation Authority
PS&E	Los Angeles County Metropolitan Transportation Authority
Right of Way	Los Angeles County Metropolitan Transportation Authority
Construction	Los Angeles County Metropolitan Transportation Authority

Legislative Districts

Assembly:	45,46	**Senate:**	18,27	**Congressional:**	29,30

Project Benefits

The MOL is operating near capacity with standing passenger loads and very tight headways. To continue to meet demands, the project will provide gating and grade separation of the busway as an innovative, safe and cost-effective way to increase speed and thereby maximize roadway capacity. It will improve traffic flow, reduce traffic congestion in the community, improve transit operations and transit options for the community, which should reduce traffic collisions and vehicle greenhouse gas emissions.

Purpose and Need

The project will expand transit services, increase transit ridership, improve transit safety, enhance the access and convenience of the traveling public, and provide or facilitate a viable alternative to driving. Since the MOL is now at capacity with riders currently delayed by cross-traffic intrusions into the MOL busway, it is needed to improve operating speeds, ridership, capacity, schedule reliability and safety, while benefitting the surrounding community and ensuring cost effectiveness.

Category	**Outputs/Outcomes**	**Unit**	**Total**
Intercity Rail/Mass Trans	At-grade crossings eliminated	each	4
Local streets and roads	Pedestrian/Bicycle facilities miles constructed	Miles	1
Intercity Rail/Mass Trans	New bridges	each	2

ADA Improvements No	Bike/Ped Improvements Yes	Reversible Lane analysis N
Inc. Sustainable Communities Strategy Goals Y	Reduces Greenhouse Gas Emissions Y	

Project Milestone	**Existing**	**Proposed**
Project Study Report Approved		
Begin Environmental (PA&ED) Phase	06/15/2018	
Circulate Draft Environmental Document **Document Type**		07/26/18
Draft Project Report		
End Environmental Phase (PA&ED Milestone)	07/31/2018	08/27/18
Begin Design (PS&E) Phase		11/01/18
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(Gates) 07-LA-Metro_Orange Line BRT_PPR - REVISED 08-09-2019.xls

District	County	Route	EA	Project ID	PPNO	Alt. ID
07	LA, ,	, ,			5504	
Project Title	Metro Orange Line Bus Rapid Transit Improvements					

Existing Total Project Cost ($1,000s)									
Component	Prior	18-19	19-20	20-21	21-22	22-23	23-24+	Total	Implementing Agency
E&P (PA&ED)	14,000							14,000	Los Angeles County Metropolitan
PS&E									Los Angeles County Metropolitan
R/W SUP (CT)									Los Angeles County Metropolitan
CON SUP (CT)									Los Angeles County Metropolitan
R/W		6,000						6,000	Los Angeles County Metropolitan
CON			295,300					295,300	Los Angeles County Metropolitan
TOTAL	14,000	6,000	295,300					315,300	
Proposed Total Project Cost ($1,000s)									**Notes**
E&P (PA&ED)	1,215	350						1,565	The original PPR has $320.3M as the total cost.
PS&E		2,500	9,500					12,000	
R/W SUP (CT)									
CON SUP (CT)									
R/W			1,000					1,000	
CON			65,435					65,435	
TOTAL	1,215	2,850	75,935					80,000	

Fund No. 1:	State SB1 LPP - Local Partnership Program - Competitive program (LPP-C)								Program Code
Existing Funding ($1,000s)									30.10.724.100
Component	Prior	18-19	19-20	20-21	21-22	22-23	23-24+	Total	Funding Agency
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON			75,000					75,000	
TOTAL			75,000					75,000	
Proposed Funding ($1,000s)									**Notes**
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									

Fund No. 2:	Local Funds - Local Transportation Funds (LTF)								Program Code
Existing Funding ($1,000s)									20.10.400.100
Component	Prior	18-19	19-20	20-21	21-22	22-23	23-24+	Total	Funding Agency
E&P (PA&ED)	14,000							14,000	
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W		6,000						6,000	
CON			220,300					220,300	
TOTAL	14,000	6,000	220,300					240,300	
Proposed Funding ($1,000s)									**Notes**
E&P (PA&ED)	1,215	350						1,565	
PS&E		2,500	9,500					12,000	
R/W SUP (CT)									
CON SUP (CT)									
R/W			1,000					1,000	
CON			65,435					65,435	
TOTAL	1,215	2,850	75,935					80,000	

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST

DTP-0001 (Revised Mar, 1 2018 v7.08)

Date: 01/07/19

Additional Information

Emissions Reduction Savings from Caltrans Life-Cycle Benefit-Cost Analysis Model v6.2
(Tons over 20 years / Millions of dollars over 20 years)

CO - 800 / $0.1
CO2 - 238,371 / $6.8
NO x - 65 / $2.6
PM10 - 2 / $0.5
PM2.5 - 2
SO x - 2 / $0.3
VOC - 42 / $0.1

The latest operations and traffic analysis for the proposed scope change did not result in a change to the assumptions used to calculate the original emissions reduction figures. The emissions reductions are a result of ridership increases/mode shifts and VMT reduction produced by creating more free-flowing conditions on the Orange Line. The proposed scope change does not change the ability of the project to create more free-flowing conditions on the Orange Line. Therefore, GHG emissions reduction is not expected to change from the original project.

Environmental Document Type: Statutory Exemption: PRC 21080(b)(11)/CEQA Guidelines 15275(a) - 8/27/18

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

ATTACHMENT 7

PROJECT PROGRAMMING REQUEST

DTP-0001 (Revised Mar, 1 2018 v7.08)

Complete this page for amendments only

Date: 01/07/19

District	County	Route	EA	Project ID	PPNO	Alt. ID
07	LA				5504	

SECTION 1 - All Projects

Project Background

Programming Change Requested

Reason for Proposed Change

Previously, a single aerial grade separation spanning Van Nuys Boulevard to Sepulveda Boulevard was proposed, but based on conceptual design, a more cost-effective and efficient design will include separate aerial structures at each of these two arterial street crossings.

If proposed change will delay one or more components, clearly explain 1) reason the delay, 2) cost increase related to the delay, and 3) how cost increase will be funded

Design of the Van Nuys grade separation will start once the East San Fernando Valley Transit Corridor Project environmentally clears the scope for the terminal station connection at the Orange Line Van Nuys station. Also, the completion of real estate acquisitions will take longer than the initial anticipated completion date.

Other Significant Information

SECTION 2 - For SB1 Projects Only

Project Amendment Request (Please follow the individual SB1 program guidelines for specific criteria)

SECTION 3 - All Projects

Approvals

I hereby certify that the above information is complete and accurate and all approvals have been obtained for the processing of this amendment request.*

Name (Print or Type)	Signature	Title	Date
Cosette P. Stark	Cosette P. Stark	DEO, Grants Management & Oversight	8/8/2019

Attachments

1) Concurrence from Implementing Agency and/or Regional Transportation Planning Agency
2) Project Location Map

ROAD REPAIR & ACCOUNTBILITY ACT OF 2017
LOCAL PARTNERSHIP COMPETITIVE PROGRAM
SCOPE CHANGE AMENDMENT REQUEST
METRO ORANGE LINE BUS RAPID TRANSIT IMPROVEMENTS

Exhibit C
ANALYSIS/REVISED
PROJECT REPORT

METRO ORANGE LINE (MOL)
BUS RAPID TRANSIT (BRT) IMPROVEMENTS

PROJECT REPORT

Project Report

APPROVAL RECOMMENDED:

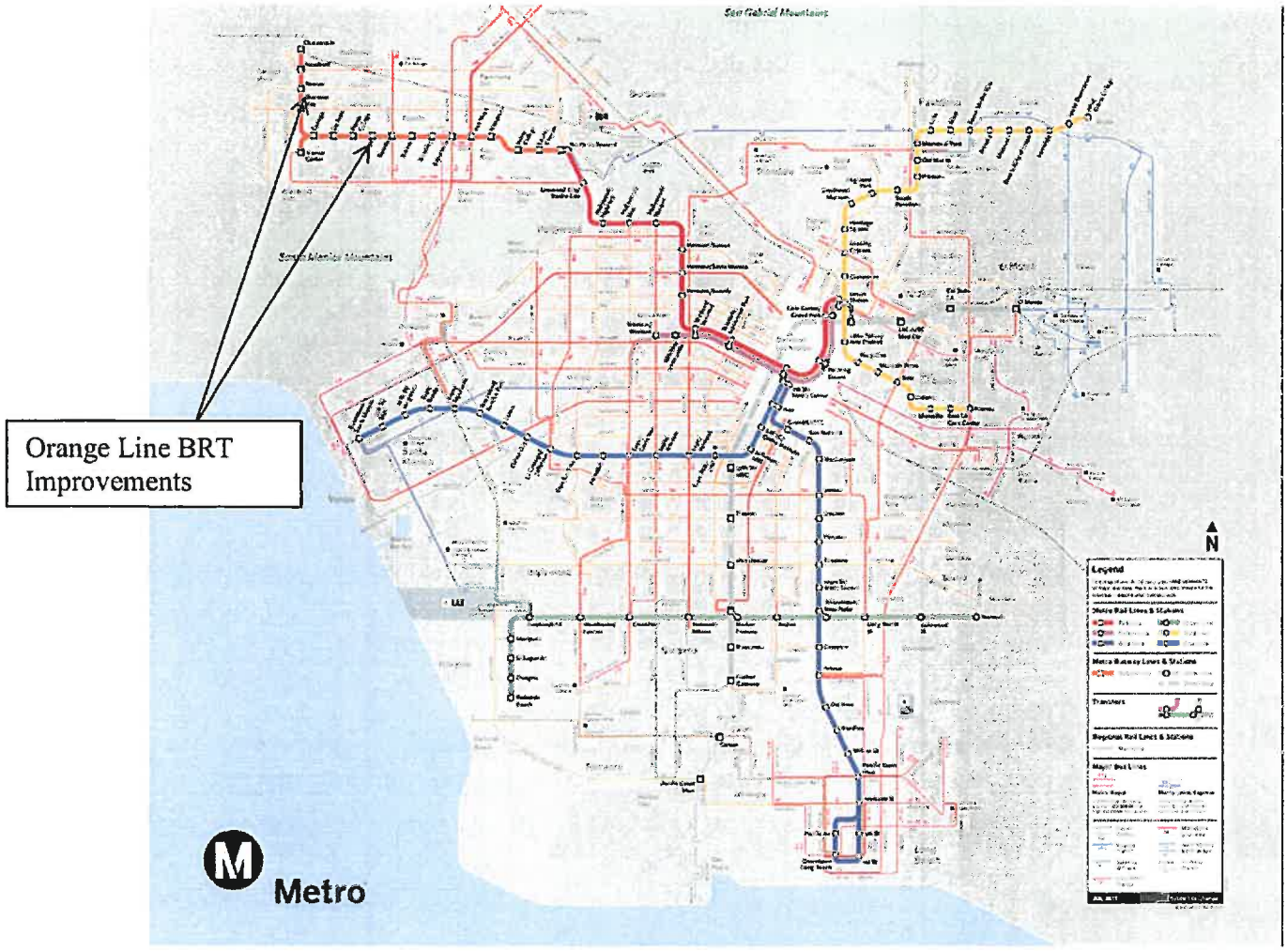
Hitesh Patel, Project Manager

PROJECT APPROVED:

David Mieger, Executive Officer

May 21, 2019
Date

Vicinity Map



1. INTRODUCTION:

Project Location:

The project is located in the City of Los Angeles, in the central part of Los Angeles County, approximately 20 miles northwest of downton Los Angeles in CALTRANS District 7. The corridor connects major activity areas through the heart of the San Fernando Valley, including Warner Center, Pierce College, the Sepulveda Basin Recreation Area, the Valley Government Center in Van Nuys, Valley College, and the North Hollywood Arts District.

The nearly 18-mile Metro Orange Line Bus Rapid Transit (MOL BRT) runs north-south along a two-lane, dedicated busway from the Metrolink Chatsworth Sation to Canoga Station for four miles and runs east-west for approximately 14 miles from the

Canoga Station to the Metro Red Line North Hollywood Station. The MOL encompasses 17 stations and runs parallel to Chandler Boulevard, Oxnard Street and Victory Boulevard and Canoga Avenue. There is also a bikeway running adjacent to the MOL busway that is comprised of two segments: Class II bike lanes from the North Hollywood Station to Coldwater Canyon Avenue, and a Class I dedicated bicycle path adjacent to the MOL busway from Coldwater Canyon on the east/west segment to Prairie on the north/south segment.

Project Description:

The MOL route is one of the most successful transit services in the Metro transit system, providing a vital, high-capacity transit link for an estimated 23,000 weekday daily riders and serving as a viable transportation alternative for those who would otherwise travel on the parallel U.S. Route 101, one of the top ten most congested highways in California. The line opened on October 29, 2005, and was extended to Chatsworth on June 30, 2012. The MOL runs from the North Hollywood Station, which connects to Metro's Red Line Subway system terminating at LA Union Station, and to the Chatsworth Station on the west.

The MOL BRT Improvements project includes grade separated structures that would elevate the busway, bike path, and associated stations at Van Nuys and Sepulveda Boulevards. The Project also includes railroad-type gate systems at 35 MOL crossings along the line (Attachment A). Gating and grade separations will help reduce the incidents of collisions between vehicles and MOL buses, allowing an increase in the speeds of buses along the corridor to reduce travel times.

Purpose and Need:

Passenger volumes are near capacity in certain segments with buses carrying approximately 1,300 passengers per hour per direction, exceeding Metro Transit Service Policy that directs that BRT service carry 1,100 riders per hour per direction. As the MOL serves a dense and growing corridor, ridership demand is expected to continue to grow over the next 10 years.

Metro currently operates three-door, 60-foot articulated buses on the MOL, with a seating capacity of 57 passengers, providing a total of 411 weekday bus trips (206 eastbound and 205 westbound). The MOL has 43 at-grade crossings, five pedestrian crossings, and is complemented by an 8.2-mile bikeway located adjacent to the busway.

Red lights at intersection crossings result in overall delays of six to ten minutes. In addition, serious safety concerns exist along the Project corridor due to excessive traffic violations and collisions at intersections. The Project corridor has nineteen red light photo enforcement cameras, which recorded, on average, 5,000 to 6,000 traffic violations of cars illegally entering the busway each month during 2018. The proposed four-quadrant gating-system will prevent cars from entering the busway,

drastically reducing opportunities for collisions. Therefore, the purpose and need for the Project is to improve operating speeds, ridership, capacity, and safety on the MOL, while benefitting the surrounding community and ensuring cost effectiveness.

2. PREFERRED ALTERNATIVE:

The Metro Orange Line 2017 Technical Study evaluated the feasibility of grade separation improvements at key intersections and other improvements that would enhance existing bus service, performance, and ridership. Other improvements considered included minor street closures, better transit signal priority technology, improved bus signal communication, and a four quadrant gating system. At the conclusion of the feasibility study, several packages of improvements were identified and among the packages of improvements, a single recommended option was developed. This alternative would address the operational needs of Orange Line buses and passengers, and improve safety at all the intersections.

The preferred alternative would provide the maximum potential improvement for the entire MOL corridor, as it allows for additional features that restrict and limit potential conflicting vehicular, pedestrian, and bicycle movements across the busway at the highest number of crossings. The combination of grade separations and gate systems would significantly impede the ability of cross-street traffic and pedestrians to illegally cross the busway while a bus is approaching or within the crossing, which would result in a significant reduction of bus-involved collisions.

This alternative is recommended because:

- It achieves superior and significant travel time savings for MOL of up to 16 minutes/29 percent each direction;
- Ridership could be increased by approximately 39 percent;
- It readies the transportation corridor for LRT conversion;
- Safety is markedly improved by nearly eliminating vehicular intrusions into the busway;

Moreover, this alternative provides commensurate improvements to the adjacent regionallysignificant active transportation facility, in furtherance of first-last mile connectivity to transit. It also accommodates two other planned, intersecting transit: East San Fernando Valley and Sepulveda Pass Transit Corridors.

3. SCOPE:

<u>Railroad Type Gates at 35 intersections along the OL:</u>
Metro has performed a detailed traffic analysis in close coordination with the Los Angeles Department of Transportation (LADOT) and is currently working with LADOT to address traffic impacts and additional delays due to gates. Metro will

explore operating buses less frequently with longer headways with two-vehicle platoons to increase passenger capacity while minimizing the frequency of gate activation and resulting delays to cross traffic. Coordination with the City of Los Angeles is also underway in implementing a pilot installation of railroad gates at a non-public, traffic signal-controlled intersection on the MOL to test and verify the reliable activation and proper operation of gates for BRT application.

Van Nuys BRT Grade Separation (GS):
The MOL GS structure would elevate the busway and the associated station at Van Nuys Blvd. The MOL developed and coordinated six concepts for connecting the MOL Aerial Station with the ESFV Light Rail Transit (LRT) project. The preliminary engineering for the Van Nuys Grade Separation is planned to commence after the ESFV Light Rail Transit (LRT) project has analyzed the connectivity options and incorporated the selected option in the ESFV Final Environmental Impact Statement/Environmental Impact Report (EIS/EIR).

Sepulveda BRT Separation:
The MOL GS structure would elevate the busway and the associated station at Sepulveda Blvd. Preliminary engineering is currently underway for the Sepulveda Grade Separation and will be coordinated with the Sepulveda Transit Corridor feasibility study.

Bike Path Grade Separations at Van Nuys and Sepulveda Blvds.
The Bike Path GS structure would elevate the bike path at Van Nuys and Sepulveda Blvds. The at-grade bike path will be maintained. The design of Bike Path GS will be developed in coordination and in parallel with the Van Nuys GS and Sepulveda GS.

3. PROJECT COST AND FUNDING

A preliminary rough order of magnitude (ROM) cost estimate of the recommended Project, based on conceptual designs, currently ranges from $320 to $393 million. A refined cost estimate will be determined after completion of the preliminary engineering of the gated intersections and the GS. The Project is currently funded with $245.3 million in Measure M and $75 million in SB-1 Local Partnership Program (LPP) Grant funds. Metro is committed to fund any cost increases to the Project above current programmed revenues.

4. PROJECT SCHEDULE:

GRADE SEPARATIONS:

Project Milestone	Existing	Proposed
Project Study Report Approved		
Begin Environmental (PA&ED) Phase	06/15/2018	
Circulate Draft Environmental Document (Document Type)		07/26/18
Draft Project Report		
End Environmental Phase (PA&ED Milestone)	07/31/2018	08/27/18
Begin Design (PS&E) Phase		11/01/18
End Design Phase (Ready to List for Advertisement Milestone)		08/30/20
Begin Right of Way Phase	10/31/2018	11/01/18
End Right of Way Phase (Right of Way Certification Milestone)	03/31/2020	06/30/21
Begin Construction Phase (Contract Award Milestone)	03/31/2020	08/01/21
End Construction Phase (Construction Contract Acceptance Milestone)	08/31/2023	02/28/25
Begin Closeout Phase	10/31/2023	03/01/25
End Closeout Phase (Closeout Report)	12/31/2024	12/31/25

GATES:

Project Milestone	Existing	Proposed
Project Study Report Approved		
Begin Environmental (PA&ED) Phase	06/15/2018	
Circulate Draft Environmental Document (Document Type)		07/26/18
Draft Project Report		
End Environmental Phase (PA&ED Milestone)	07/31/2018	08/27/18
Begin Design (PS&E) Phase		11/01/18
End Design Phase (Ready to List for Advertisement Milestone)		02/28/21
Begin Right of Way Phase	10/31/2018	06/01/19
End Right of Way Phase (Right of Way Certification Milestone)	03/31/2020	06/30/21
Begin Construction Phase (Contract Award Milestone)	03/31/2020	03/01/22
End Construction Phase (Construction Contract Acceptance Milestone)	08/31/2023	02/28/25
Begin Closeout Phase	10/31/2023	03/01/25
End Closeout Phase (Closeout Report)	12/31/2024	12/31/25

5. POTENTIAL RISK AREAS

A number of potential risk areas identified will require further attention and analysis during subsequent project phases. The issues include:

Risk Area 1: Unacceptable traffic impacts from adding gates at some locations could cause delay in approval by the City.

As the gate systems require additional advance warning time, the project assumes changes to busway operations to minimize cross-traffic delays. The preferred alternative assumes that during peak periods, buses would operate in two-vehicle platoons at six-minute headways. This operation would allow the busway to carry the same amount of peak period riders at increased headways, thereby reducing the frequency of gate activation and reducing associated potential cross traffic delays.

Mitigations: Continue dialogue with City staff and continue to analyze traffic impacts.

Risk Area 2: New technology for bus platooning does not meet Metro requirements.

The current design of the traffic control systems for the four-quadrant gate systems and pedestrian gate systems assumes buses will be manually platooned with 2 buses per platoon with a 10 second gap between buses at 6 minute headways. New technology for bus platooning is being explored as part of the pilot gate testing to improve bus operation and potentially reduce traffic impacts.

Mitigations: Complete pilot gate testing as early as practical

Risk Area 3: Gates and platooning for bus transit does not exist in US; new technology to be developed.

Railroad Type Gates are common for railroad crossings, but none currently exist for stopping cross street traffic when buses approach the intersections. Metro is conducting a pilot gate to utilize loop detection for controlling gates for busway operation. Metro will also test other technologies for gate detection/control.

Mitigations: Develop technical solution in concert with current scope and design; Review alternate options in case pilot gate testing and bus platooning technology are not feasible.

Risk Area 4: Sepulveda and East San Fernando Valley Transit Corridor Projects may affect MOL Grade Separations at Sepulveda and Van Nuys.

The Sepulveda Transit Corridor (STC) is completing a feasibility study that is evaluating a range of rail transit alternatives to serve the San Fernando Valley and the Westside Los Angeles, including the Los Angeles Internationa Airport (LAX) area. The feasibility study is expected to be completed in Fall 2019 and is looking at alternatives that connect to the MOL at Sepulveda or Van Nuys, the two locations that are recommended for grade separations as part of the MOL improvements project. The STC environmental review of selected alternatives is expected to begin in early 2020. East San Fernando Valley (ESFV) Light Rail Transit is currently preparing a Final EIS/EIR based on the Locally Preferred Alternative (LPA) recently selected by the Metro Board. In conjunction with the Final EIS/EIR, the ESFV team is modifying the LPA alignment to enable it to better connect with an elevated MOL

station at Van Nuys. Preliminary Engineering (PE) for the MOL grade separation at Sepulveda Boulevard is currently underway, with anticipated completion in August 2019, before any information on STC connectivity/selected alternative is available. MOL construction may need to be modified for a future connection to STC. Grade separations may conflict with some STC alternatives or even become part of the STC project.

Mitigations: Early and ongoing coordination with Sepulveda and ESFV project teams.

Risk Area 5: MOL Van Nuys grade separation on hold until scope of connectivity with ESFV project is approved.

Mitigations: Continue close coordination with ESFV project team to reconcile station foot print.

Risk Area 6: Right-of-Way (ROW) impacts and design issues related to aerial bike path at Sepulveda and Van Nuys may exceed current forecasted budget.

Issues related to the aerial bike path at Sepulveda include:

- Property acquisitions required at Sepulveda with the re-routing of the existing at-grade pedestrian/bike path to the north of the station and an elevated bike path is also routed to the north of the station over Sepulveda Blvd.

- Sepulveda parking lot access road require relocationg through an adjacent property to fit additional escalators.

- Existing City of Los Angeles Depaprtment of Water and Power (LADWP) transformer serving LA Fitness is affected by the overhead proximity of the aerial bikeway.

- ROW is required in the north-east corner of Sepulveda Blvd. and includes driveway access which may result in a complicated and costly ROW take.

- Metro's existing parking easement would need to be terminated which will result in eliminating approximately 50 parking spaces at the north-east corner of Sepulveda Blvd.

Mitigations: Real Estate team to review and prepare ROM estimate for property acquisitions. Design team to review design of aerial bike path at Sepulveda and Van Nuys and develop alternate designs and finalize escalator location.

Risk Area 7: LADWP is requiring relocation of conflicting overhead power lines to underground. The cost of undergrounding power lines and the communication lines are significantly higher and may affect overall project cost.

Mitigations: Support utility design and finalize utility relocation matrix to develop a detailed schedule.

Risk Area 8: City agency review and approval time for drawing submittals, traffic management plans, traffic control plans and permits may delay project schedule.

Mitigations: Continue ongoing collaboration with City staff to streamline and prioritize design submittals and traffic control plans.

Risk Area 9: City of Los Angeles Department of Transportation (LADOT) Bikeway Project on Chandler.

LADOT recently informed us of the City's plan to implement a 3-mile bikeway project on Chandler Blvd., from Leghorn Ave. to Vineland Ave., that will be completed in 2020. It appears that these modifications would affect 8 intersections/crossings, reducing the east & west Chandler Ave approaches by 1 thru lane. The biggest impacts would likely occur at the Laurel Canyon and Coldwater Canyon intersections (where delays are already high). If traffic volumes remained as-is (no diversion to other routes), then this bike lane would result in worse delay/LOS at all of these locations or potentially eliminate gates at affected crossings along Chandler.

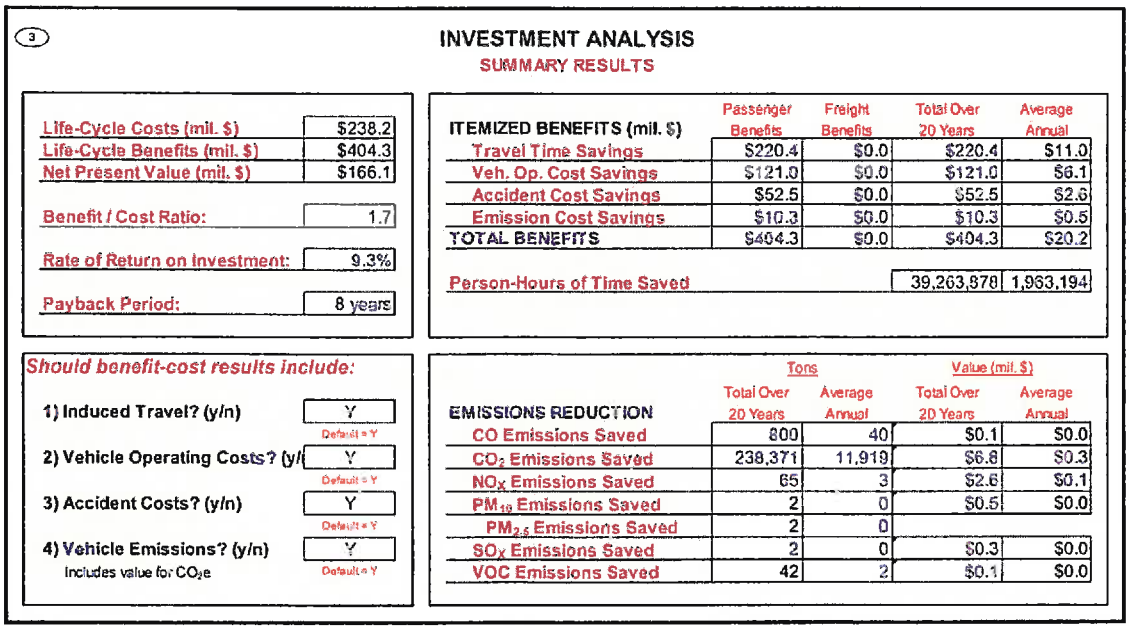
Mitigations: Continue coordination with LADOT on this project.

6. PROJECT BENEFITS

Based on the Caltrans' Life-Cycle Benefit-Cost Analysis Model 6.2 (Cal-B/C v.6.2), provided in Attachment B, the Project would save commuters approximately $220.4 million in travel time savings, $121 million in vehicle operating cost savings, and $10.3 million in emission cost savings over a 20-year period.

With a benefit-cost ratio (BCR) of 1.7, the Project is likely to generate economic benefits that justify its costs.

Summary Results of Revised Benefit/Cost Analysis for Scope Change:



INVESTMENT ANALYSIS
SUMMARY RESULTS

Life-Cycle Costs (mil. $)	$238.2
Life-Cycle Benefits (mil. $)	$404.3
Net Present Value (mil. $)	$166.1
Benefit / Cost Ratio:	1.7
Rate of Return on Investment:	9.3%
Payback Period:	8 years

ITEMIZED BENEFITS (mil. $)	Passenger Benefits	Freight Benefits	Total Over 20 Years	Average Annual
Travel Time Savings	$220.4	$0.0	$220.4	$11.0
Veh. Op. Cost Savings	$121.0	$0.0	$121.0	$6.1
Accident Cost Savings	$52.5	$0.0	$52.5	$2.6
Emission Cost Savings	$10.3	$0.0	$10.3	$0.5
TOTAL BENEFITS	$404.3	$0.0	$404.3	$20.2
Person-Hours of Time Saved			39,263,878	1,963,194

Should benefit-cost results include:

1) Induced Travel? (y/n)	Y (Default = Y)
2) Vehicle Operating Costs? (y/	Y (Default = Y)
3) Accident Costs? (y/n)	Y (Default = Y)
4) Vehicle Emissions? (y/n) Includes value for CO_2e	Y (Default = Y)

	Tons		Value (mil. $)	
EMISSIONS REDUCTION	Total Over 20 Years	Average Annual	Total Over 20 Years	Average Annual
CO Emissions Saved	800	40	$0.1	$0.0
CO_2 Emissions Saved	238,371	11,919	$6.8	$0.3
NO_X Emissions Saved	65	3	$2.6	$0.1
PM_{10} Emissions Saved	2	0	$0.5	$0.0
$PM_{2.5}$ Emissions Saved	2	0		
SO_X Emissions Saved	2	0	$0.3	$0.0
VOC Emissions Saved	42	2	$0.1	$0.0

The Project will provide optimal improvements to address five specific goals and needs: improve operations; improve ridership, address growth; support efficient land use; address safety concerns; and ensure cost effectiveness.

Improve Operating Speeds and Reliability

The number of times buses stop at traffic signals along the route significantly affects the overall MOL operating speeds and service. The Technical Study found that the west/northbound travel time from North Hollywood to Canoga station averaged 41.3 minutes. The east/southbound travel time from Canoga to North Hollywood station averaged approximately 38.5 minutes. Average time to travel the 17 miles end-to-end on the MOL from the Chatsworth to North Hollywood Stations during the weekday PM peak was as high as 50 to 55 minutes. Red lights result in delays to buses of approximately 10 minutes in the westbound and six minutes in the eastbound direction.

By providing grade separated busway and 35 gating intersections, bus speeds can be increased and current riders' complaints of excessive cross-Valley travel times and delays at intersections may be addressed. With the Project, MOL bus travel times are anticipated to be reduced by an average (peak and off-peak) of 12.6 minutes in the west/northbound direction and 3.4 minutes in the east/southbound direction, for a total average reduction in travel times of 16 minutes each way, a 39 percent reduction from current travel times. In addition, after Project completion, two-vehicle bus platoons will be used during peak periods to minimize the frequency of gate activation and delays to cross-traffic.

Improve Transit Ridership

In 2017, average daily ridership for the MOL was around 23,760 on a typical weekday, 13,768 on Saturdays, and 10,551 on Sundays (see Figure4). The Technical Study predicted that, without the Project, ridership is likely to increase to just 25,900 daily boardings by 2025.

Current operating speeds on the MOL corridor are approximately 20 to 21 mph, including delay/ dwell times for boardings/alighting at stations on all service days. The Project is expected to increase operating speeds to an average of 30 mph, a 50 percent increase over current levels. The Technical Study found that a 20 to 30 percent speed increase and travel time reliability may result in a ridership increase of approximately 39 percent. With the expected 50 percent speed improvement, ridership is likely to increase even more than the projections in the Technical Study.

Address Growth

The MOL is operating near capacity, with standing passenger loads and very frequent headways, up to every four minutes, during peak hours. To continue to meet demands, the Project will provide gating and grade separation of the busway as an innovative, safe, and cost-effective way to reduce BRT end-to-end travel time, thereby, allowing for more buses to operate in the corridor. By enhancing operational capacity through increased speeds, the Project will address ridership increases likely to result from population and employment growth. Population densities are concentrated north of the MOL corridor between the North Hollywood and Sepulveda Stations (see Figure 5). Employment densities are relatively consistent throughout the MOL service area with a concentration of jobs at and near the Warner Center and near major intersections on Van Nuys, Sepulveda, and Reseda Boulevards (see Figure 6). A total of 20 percent growth in population and 26 percent growth in employment from 2012 to 2040 are projected for the MOL service area1. The Project will address ridership increases resulting from this population and employment growth.

Support Efficient Land Use

By enhancing operational capacity with increased speeds and service availability and convenience on the MOL, the Project will address potential ridership increases.

Address Safety Concerns

Based on incident data from 2018, there were 24 collisions and an average of 5,000 to 6,000 red light violations (through movements by vehicles crossing the MOL corridor) recorded along the MOL corridor from North Hollywood to Canoga. Along the MOL corridor, red light photo enforcement cameras have been installed at 19 locations between Tujunga and Nordhoff.

Key locations on the MOL corridor will benefit from improvements that reduce conflicts between MOL buses, vehicles, bicyclists, and pedestrians. In particular, grade separations at key intersections can minimize conflicts and prevent incidents by physically separating the MOL corridor from perpendicular roadways. Railroad-style quadrant gates will address safety concerns by managing and monitoring vehicle and

bicycle/pedestrian interactions with MOL operations. By blocking cars, pedestrians, and bicyclists from entering the busway when they do not have the right-of-way, the Project will improve safety for all as the number of collisions following Project completion is expected to drop significantly.

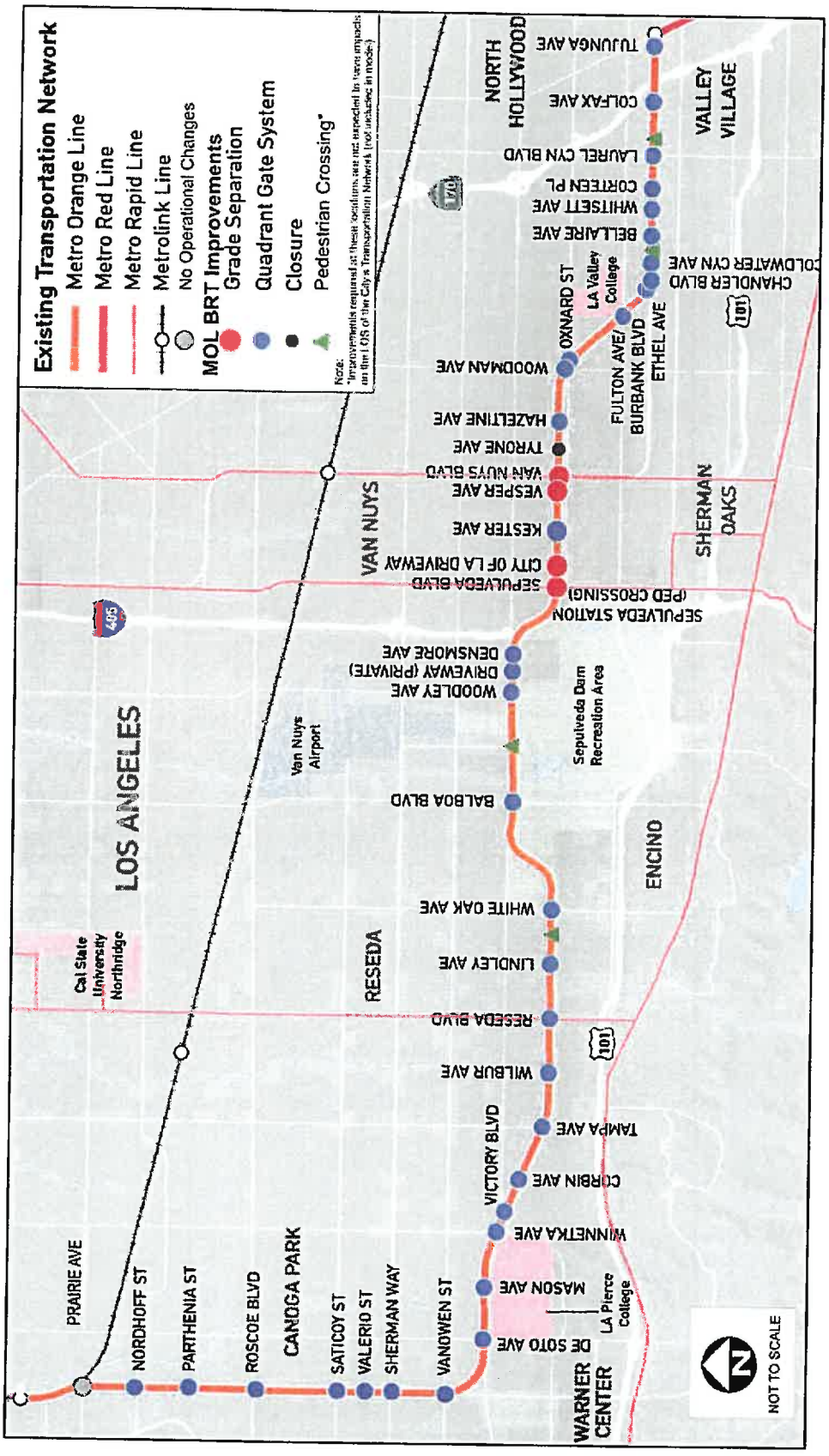
Ensure Cost Effectiveness

The MOL is a successful BRT system with 23,000 average weekday riders in 2018. As detailed in Attachment B, the Project has a benefit-cost ratio of 1.5, ensuring that costs are commensurate with benefits to continue the overall cost-effectiveness of the system.

7. ATTACHMENTS (Number of Pages)

A. Project Map
B. Updated Benefit Cost Analysis

ATTACHMENT A: PROJECT MAP



Attachment B

Comprehensive Benefit/Cost Analysis for Metro Orange Line BRT Improvements Scope Change

The following tables present the assumptions and results for the original and proposed scope of the Metro Orange Line BRT Improvements project using the Caltrans Benefit/Cost Analysis Model (BCA). Overall, the new assumptions and BCA Results for the proposed scope change reflect not only the scope change, but also improved understanding of and data for the entire project.

Summary of Tables:

- **Table 1. Comparison of Benefit/Cost Analysis Assumptions**

  Table 1 shows the original and new values used for the Caltrans Benefit/Cost Analysis Model (BCA).

  There is no change to most variables between the original and proposed scope change. This is because the proposed scope change does not cause changes to the model from which those values originate (i.e. the study area is the same). At the time of application for the original scope, the 2017 analysis focused on the 12.7-mile segment from North Hollywood to Canoga. The variables for which there are new values (i.e. variables related to travel time/delay) originate from a different model (Traffic Analysis Model). The 2018 analysis in Table 1 below shows the performance metrics for all segments of the Orange Line corridor. To facilitate understanding of the changed values, the line numbers in Table 1 correspond with the line numbers in Table 2, which provides explanation for changed values by comparing the methodology, assumptions, and approaches used for the original and new values.

- **Table 2. Comparison of Methodology/Assumptions/Approach**

  Table 2 compares the methodology, assumptions, and approaches to the analyses used to develop the values for the BCA.

- **Table 3. Original Benefit/Cost Analysis**

  As noted, the original BCA was conducted using values from analyses based on conceptual design and covering only a segment of the Orange Line for travel time/delay.

- **Table 4. Revised Benefit/Cost Analysis for Scope Change**

  Using the new assumptions, the BC ratio for the proposed scope change is higher than the original scope. There is no change to emissions reduction

Table 1. Comparison of Benefit/Cost Analysis Assumptions

Line #	Variable	Unit	Original Value* (from 2017 Analysis)	New Value (estimated from 2018 Analysis)
	Ridership Increase (also decrease in auto trips)	New MOL trips per day	10,100	No change
		New MOL trips per year	3,191,600	No change
1	**MOL In-Vehicle Travel Time Change**	Minutes per trip	North Hollywood to Canoga (12.7 miles) - 12.6	North Hollywood to Chatsworth (18 miles) - 16
	MOL Out-of-Vehicle Travel Time Change	Minutes per trip (Peak)	2	No change
		Minutes per trip (Off-Peak)	0	No change
1	**Parallel Roadway Travel Time**	Minutes per trip (bidirectional average)	North Hollywood to Canoga (12.7 miles) 42	North Hollywood to Chatsworth (18 miles) 54
	Trips during Peak Period	Percent	70%	No change
	Bus Vehicle Miles	Average weekday miles	6183.1	No change
		Average Saturday miles	3725.6	No change
		Average Sunday miles	3487.4	No change
		Annual total estimate	1,982,682	No change
	Change in Automobile VMT	Daily VMT change	- 81,756	No change
		Annual VMT change	- 25,834,896	No change
	Average automobile speed	Miles per hour	20	No change
3	**Vehicles crossing gate quadrant streets**	Number of daily vehicles	305,000	307,000 (with Kester)
		Number of annual vehicles	96,380,000	97,012,000
3	**Vehicles crossing grade separation streets**	Number of daily vehicles	45,000	43,000
		Number of annual vehicles	14,220,000	13,588,000
1-12	**Change in average cross traffic delay for gate quadrants**	Seconds of delay	7	12
	Change in average cross traffic delay for grade separations	Seconds of delay	- 5	No change

*Values shown in 2017 analysis represent the 12.7-mile E-W corridor (North Hollywood to Canoga).

Table 2. Comparison of Methodology/Assumptions/Approach

Line #		2017 Analysis	2018 Analysis
Overall Model (at all locations)			
1	Study Area	North Hollywood to Canoga (E-W segment, 12.7 miles)* * Although the 2017 analysis focused on the 12.7-mile segment of the Orange Line, the Project was extended to the entire 18-mile corridor (North Hollywood to Chatsworth) with the installation of gate systems at all crossings to provide the maximum potential improvement for the entire Orange Line corridor.	North Hollywood to Chatsworth (entire Orange Line, 18 miles)
2	Analysis Output	N-S crossing delay only	LOS analysis, all approaches included
3	Counts	2015 counts	December 2017 counts; project conditions were grown using calculated SCAG growth rates
4	Geometrics	• Existing condition geometries for both existing and project conditions; no design elements included • "Hybrid" project included one full grade separation from Sepulveda to Van Nuys (including Kester), and road crossing closures at Corteen, Tyrone, and Densmore	• Project conditions include conceptual design, including proposed median and gate locations • Two grade separations (one between Sepulveda and City of LA driveway and one between Vesper and Van Nuys; gates at Kester) • Road crossing closure at Tyrone
5	Signal Timing	No changes to intersection signal timings from existing conditions to project conditions	Based on proposed geometric design changes, lead/lag phasing and new protected left-turn phasing added per consultation with LADOT

Table 2. Comparison of Methodology/Assumptions/Approach

Line #		2017 Analysis	2018 Analysis
6	Preemption under Project Conditions	**Basic** at-grade rail crossing preemption that stops traffic only for affected movements (i.e. existing signal timing runs as-is independent of preemption). No advanced preemption or exit phasing assumed.	LADOT Railroad Preemption Form used at each gate crossing (i.e. **hard** preemption). Form includes advanced preemption (i.e. **pedestrian clearance** & busway/track clearance time), gates lowering, gates down, and exit phasing prior to resumption of normal operations.
7	Bus Operations	One 40-foot bus per 6 minutes	Two 60-foot electric buses per 6 minutes, spaced 10 seconds apart as a platoon
8	Pedestrian Activity	No pedestrian crosswalks or counts included	Pedestrian crosswalks, counts, and activity included
Additional Specific Intersection Notes			
9	Chandler Boulevard/ Laurel Canyon Boulevard/MOL Busway	Existing conditions operations maintained in project conditions with exception of overlaid basic preemption	• NB/SB lead-lag left-turn phasing for project conditions • EB/WB lead-lag left-turn phasing for project conditions
10	Chandler Boulevard/ Coldwater Canyon Boulevard/MOL Busway	Existing conditions operations maintained in project conditions with exception of overlaid basic preemption	NB/SB lead-lag left-turn phasing for project conditions
11	Burbank Boulevard/ Fulton Avenue/MOL Busway	Project conditions show the busway does not initiate preemption here or halt any phase operations. This suggests a proposed grade separation in the modeling.	• EB/WB protected left-turn phasing for project conditions • All movements stop when bus platoon crosses intersection

Table 2. Comparison of Methodology/Assumptions/Approach

Line #		2017 Analysis	2018 Analysis
12	Tampa Avenue/ Topham Street/MOL Busway	Existing conditions operations maintained in project conditions with exception of overlaid basic preemption	SBR eliminated under project conditions

Attachment B

Table 3. Original Benefit/Cost Analysis

(3)

INVESTMENT ANALYSIS
SUMMARY RESULTS

Life-Cycle Costs (mil. $)	$238.2
Life-Cycle Benefits (mil. $)	$357.5
Net Present Value (mil. $)	$119.4
Benefit / Cost Ratio:	1.50
Rate of Return on Investment:	8.0%
Payback Period:	9 years

ITEMIZED BENEFITS (mil. $)	Passenger Benefits	Freight Benefits	Total Over 20 Years	Average Annual
Travel Time Savings	$173.7	$0.0	$173.7	$8.7
Veh. Op. Cost Savings	$121.0	$0.0	$121.0	$6.1
Accident Cost Savings	$52.5	$0.0	$52.5	$2.6
Emission Cost Savings	$10.3	$0.0	$10.3	$0.5
TOTAL BENEFITS	$357.5	$0.0	$357.5	$17.9
Person-Hours of Time Saved			32,888,986	1,644,449

Should benefit-cost results include:

1) Induced Travel? (y/n)	Y (Default = Y)
2) Vehicle Operating Costs? (y/	Y (Default = Y)
3) Accident Costs? (y/n)	Y (Default = Y)
4) Vehicle Emissions? (y/n) Includes value for CO_2e	Y (Default = Y)

EMISSIONS REDUCTION	Tons: Total Over 20 Years	Tons: Average Annual	Value (mil. $): Total Over 20 Years	Value (mil. $): Average Annual
CO Emissions Saved	800	40	$0.1	$0.0
CO_2 Emissions Saved	238,371	11,919	$6.8	$0.3
NO_X Emissions Saved	65	3	$2.6	$0.1
PM_{10} Emissions Saved	2	0	$0.5	$0.0
$PM_{2.5}$ Emissions Saved	2	0		
SO_X Emissions Saved	2	0	$0.3	$0.0
VOC Emissions Saved	42	2	$0.1	$0.0

Table 4. Revised Benefit/Cost Analysis for Scope Change

(3)

INVESTMENT ANALYSIS
SUMMARY RESULTS

Life-Cycle Costs (mil. $)	$238.2
Life-Cycle Benefits (mil. $)	$404.3
Net Present Value (mil. $)	$166.1
Benefit / Cost Ratio:	1.7
Rate of Return on Investment:	9.3%
Payback Period:	8 years

ITEMIZED BENEFITS (mil. $)	Passenger Benefits	Freight Benefits	Total Over 20 Years	Average Annual
Travel Time Savings	$220.4	$0.0	$220.4	$11.0
Veh. Op. Cost Savings	$121.0	$0.0	$121.0	$6.1
Accident Cost Savings	$52.5	$0.0	$52.5	$2.6
Emission Cost Savings	$10.3	$0.0	$10.3	$0.5
TOTAL BENEFITS	$404.3	$0.0	$404.3	$20.2
Person-Hours of Time Saved			39,263,878	1,963,194

Should benefit-cost results include:

1) Induced Travel? (y/n)	Y (Default = Y)
2) Vehicle Operating Costs? (y/	Y (Default = Y)
3) Accident Costs? (y/n)	Y (Default = Y)
4) Vehicle Emissions? (y/n) Includes value for CO_2e	Y (Default = Y)

EMISSIONS REDUCTION	Tons: Total Over 20 Years	Tons: Average Annual	Value (mil. $): Total Over 20 Years	Value (mil. $): Average Annual
CO Emissions Saved	800	40	$0.1	$0.0
CO_2 Emissions Saved	238,371	11,919	$6.8	$0.3
NO_X Emissions Saved	65	3	$2.6	$0.1
PM_{10} Emissions Saved	2	0	$0.5	$0.0
$PM_{2.5}$ Emissions Saved	2	0		
SO_X Emissions Saved	2	0	$0.3	$0.0
VOC Emissions Saved	42	2	$0.1	$0.0

ROAD REPAIR & ACCOUNTBILITY ACT OF 2017
LOCAL PARTNERSHIP COMPETITIVE PROGRAM
SCOPE CHANGE AMENDMENT REQUEST
METRO ORANGE LINE BUS RAPID TRANSIT IMPROVEMENTS

Exhibit D
Caltrans
Recommendation

ISSUE:

Should the California Transportation Commission approve a scope change amendment for the Senate Bill 1 Local Partnership Competitive Program LA METRO Bus Rapid Transit Improvement Project?

BACKGROUND:

The Metro Orange Line Bus Rapid Transit Improvement Project was adopted as part of the 2018 Local Partnership Competitive Program. While still in the design process, it was revealed to the Department in early 2019 that a scope change was needed due to a more cost-effective and efficient design, that will also allow connectivity with the East San Fernando Valley Transit Corridor and Sepulveda Pass projects.

SUMMARY:

The scope change altered a busway grade separation from one bridge spanning over five intersections to two smaller bridges spanning over four intersections, adding a quadrant gate to an intersection in the middle of the five intersections, that was to be a grade separation in the original design.

The California Department of Transportation has worked with California Transportation Commission staff and LA METRO to ensure there are no major changes in outputs, outcomes, or benefits. The benefits of the project as presented in the application were vigorously compared to the benefits of the new design.

After thorough review by Commission and Department staff, and consultations with engineering staff regarding the revisions, it was determined that although the design scope change of the project may be considered significant, the effect on the original outputs, outcomes, and benefits as promised in the original project application, are minor.

RECOMMENDATION:

As the circumstances surrounding the scope change were unforeseen at the time of application, and the benefits of the project are nearly the same after the design change, the California Department of Transportation recommends the California Transportation Commission approve the change in scope for the Metro Orange Line Bus Rapid Transit Improvement Project.