



CITY OF COMMERCE AGENDA REPORT

TO: Honorable City Council

FROM: Assistant City Manager

SUBJECT: Eastern Avenue Transit Hub Presentation

MEETING DATE: January 23, 2023

RECOMMENDATION:

The City Council will receive and file a presentation by HCI, the City's Traffic consultant on the completed Eastern Avenue Transit Hub Project and

1. Authorize staff to proceed with restricting movement on Jilson Street at Eastern Avenue to Right Turn only in both directions in lieu of a traffic signal; and
2. Authorize Alternative 3 for Eastern Avenue revised striping plans previously presented and including the revised striping with the next Pavement Management Rehabilitation Project; and
3. Approve an appropriation of \$291,000 from Measure AA for the restriping.
4. Provide alternative direction.

BACKGROUND:

In October 2020, the City Council adopted the Bike and Pedestrian Master Plan and staff began incorporating bike facilities into projects beginning with the Eastern Avenue Transit Hub Project.

On January 12, 2021, the City Council approved the Commerce in Motion Comprehensive Operational Analysis (COA) service plan recommendations. The COA recommendations address the community's unmet transportation needs, such as more frequent service, expanded weekend service, and route extensions including designing and building a transit hub.

On April 20, 2021, the City Council approved the Concept Design for the Eastern Avenue Transit Hub located on Eastern Avenue at Harbor Street and on June 1, 2021, the City Council approved the plans and specifications for the Eastern Avenue Transit Hub Project and authorized staff to advertise the project for bids and subsequently awarded a construction contract to CEM. The work was

completed and on June 27, 2023, the City Council accepted the work as completed and authorized staff to file the "Notice of Completion" with the County Recorder's Office for the project and authorized the release of Contractor's 5% retention per contract provisions.

On August 8, 2023, staff provided the City Council a report with five alternatives to the narrowing of two lanes to one on Eastern Avenue and the addition of the City's first bike lanes. The five alternatives with costs are summarized below and the details are attached:

EASTERN AVENUE BETWEEN SHEILA STREET AND HARBOR STREET					
Wet Sandblast	\$ 25,000.00	\$ 25,000.00	\$ 25,000.00	\$ 25,000.00	\$ 25,000.00
Slurry Seal on AC Pavement	\$ 134,000.00	\$ 134,000.00	\$ 134,000.00	\$ 134,000.00	\$ 134,000.00
Signing & Striping	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00
TOTAL 'BASE'	\$ 209,000.00	\$ 209,000.00	\$ 209,000.00	\$ 209,000.00	\$ 209,000.00

EASTERN AVENUE BUS HUB MODIFICATION					
	Alternative 1 Bike Path	Alternative 2 Bus Tun Out	Alternative 3 Share the Road	Alternative 3A Sharrows	Alternative 4 No Bike Lanes
Remove Curb & Gutter	\$ -	\$ 8,750.00	\$ -	\$ -	\$ -
Remove Sidewalk	\$ -	\$ 14,000.00	\$ -	\$ -	\$ -
Relocated Bus Benches/Kiosks	\$ -	\$ 7,500.00	\$ -	\$ -	\$ -
Relocate Fire Standpipe	\$ 12,500.00	\$ 12,500.00	\$ -	\$ -	\$ -
Remove Landscaping	\$ 20,625.00	\$ 17,000.00	\$ -	\$ -	\$ -
Modify Irrigation	\$ 3,000.00	\$ 3,000.00	\$ -	\$ -	\$ -
Construct Bus Pad	\$ -	\$ 128,000.00	\$ -	\$ -	\$ -
Construct Curb & Gutter	\$ -	\$ 21,875.00	\$ -	\$ -	\$ -
Construct Sidewalk	\$ -	\$ 16,800.00	\$ -	\$ -	\$ -
Construct Bike Ramp	\$ 10,000.00	\$ -	\$ -	\$ -	\$ -
Construct Bike Path	\$ 24,750.00	\$ -	\$ -	\$ -	\$ -
Construct Retaining Curb	\$ 21,375.00	\$ -	\$ -	\$ -	\$ -
Signing & Striping	\$ 2,500.00	\$ 5,000.00	\$ 2,500.00	\$ 3,500.00	\$ (30,000.00)
BUS HUB TOTAL	\$ 94,750.00	\$ 234,425.00	\$ 2,500.00	\$ 3,500.00	\$ (30,000.00)

"BASE" + BUS HUB TOTAL	\$ 303,750.00	\$ 443,425.00	\$ 211,500.00	\$ 212,500.00	\$ 179,000.00
CONTIGENCIES @10%	\$ 30,375.00	\$ 44,342.50	\$ 21,150.00	\$ 21,250.00	\$ 17,900.00
TOTAL	\$ 334,125.00	\$ 487,767.50	\$ 232,650.00	\$ 233,750.00	\$ 196,900.00

DESIGN @10%	\$ 33,412.50	\$ 48,776.75	\$ 23,265.00	\$ 23,375.00	\$ 19,690.00
CONST. MANAGEMENT @15%	\$ 50,118.75	\$ 73,165.13	\$ 34,897.50	\$ 35,062.50	\$ 29,535.00
GRAND TOTAL	\$ 417,656.25	\$ 609,709.38	\$ 290,812.50	\$ 292,187.50	\$ 246,125.00
USE	\$ 418,000.00	\$ 610,000.00	\$ 291,000.00	\$ 293,000.00	\$ 247,000.00

Alternative 1 - ROW Dedication is Approx. 2,062.5 SF

Alternative 2 - ROW Dedication is Approx. 1,700 SF

Alternative 3 - Estimated \$30,000 reduction in costs by not re-installing bike lanes (Sheila Street to Harbor Street)

City Council, upon conclusion of staff's presentation and discussion, raised comments and concerns and requested that staff bring the item back addressing Council comments including pre and post Eastern Avenue traffic lane reduction impacts, determination of the effectiveness of recent signal timing changes at Eastern Avenue and Harbor Street and traffic control measures at Eastern Avenue and Jillson Street such as multiway stop signs.

ANALYSIS

Since August 8, 2023, in addition to implementation of new signal timing at the Eastern Avenue and Washington Boulevard intersection and installation of KEEP CLEAR pavement markings on Eastern Avenue at Jillson Street, HCI Traffic Engineering was retained to conduct a traffic study addressing Council concerns. The result of the traffic study is summarized below:

Multiway Stop Warrants

Based on the study resulting in the attached Report, the Eastern/Jillson intersection meets the volumetric thresholds for a multiway Stop. However, the CA Manual of Uniform Traffic Control Devices (MUTCD) advises to implement multiway Stops only on streets with relatively equal volumes. Eastern Avenue has approximately 87 percent of the traffic and Jillson Street has approximately 13 percent of the traffic. Consequently, implementation of Stop signs on Eastern Avenue would result in vehicles queuing back and blocking Washington Boulevard. It is not recommended to install Stop signs on Eastern Avenue.

Traffic Signal Warrants

Based on the study resulting in the attached Report, the Eastern/Jillson intersection met signal warrants. However, the CA MUTCD notes ***“the satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.”*** It advises to use engineering judgment to determine if there are other measures that would adequately address the traffic concerns observed at the intersection.

Jillson Street and Washington Boulevard are spaced approximately 340 feet apart. As a rule of thumb, traffic signals should be spaced a minimum of 600 feet apart. This intersection spacing can result in northbound (NB) vehicles queuing back from Jillson Street and blocking Washington Boulevard. *In lieu of the traffic signal, it is recommended to restrict the movements at Jillson Street to right turn only. The left-turn and through movements from Jillson Street would be prohibited.*

Level of Service Analysis

It should be noted that the lane reduction on Eastern Avenue from four (4) lanes to two (2) lanes also reduced the roadway capacity. Consequently, drivers would experience more travel delay on Eastern Avenue. Based on the Table below, that was most noticeable at the Eastern/Washington intersection during the PM peak hour; the average delay increased by approximately 19.2 seconds during the PM peak hour. However, the intersection continues to operate at an acceptable Level of Service D (LOS D). It should be noted that LA County has recently implemented signal timing changes so the public should experience an improvement in delay time, but not to the levels prior to the lane reduction.

Travel Delays at Intersections

	AM Peak Hour			PM Peak Hour		
	Before (4 Lanes on Eastern Ave)	After (2 Lanes on Eastern Ave)	LA County Timing Changes	Before (4 Lanes on Eastern Ave)	After (2 Lanes on Eastern Ave)	LA County Timing Changes
Eastern Ave at Washington Blvd	32.4 / C	36.8 / D	34.9 / C	33.2 / C	52.4 / D	41.4 / D

Eastern Ave at Harbor St	8.6 / A	9.2 / A	10.5 / B	6.2 / A	10.1 / B	7.5 / A
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Because the intersection continues to operate at an acceptable LOS D, the lane reduction on Eastern Avenue was not deemed to create a significant impact in terms of LOS. Consequently, Eastern Avenue is not required to revert back to a 4-lane road. However, City Council can use its discretion to restore Eastern Avenue as a 4-lane road.

Collision History

The attached Report reviewed the collision history before and after the lane reduction on Eastern Avenue from Washington Boulevard to Harbor Street. For the before scenario, the 7-year collision history was used from 2013 to 2019. It excluded 2020 to 2022 because of the abnormal traffic patterns during the Covid pandemic. For the after scenario, it only included collisions from March 2023 to the present, which coincides with the completion of the striping changes on Eastern Avenue.

As shown in the Table below, the corridor had 55 total collisions over seven (7) years. The high was 13 collisions in 2019; and the low was zero (0) collisions in 2015. *The average was 7.9 collisions per year before the lane reduction on Eastern Avenue. After the lane reduction, there have been six (6) recorded collisions over a six-month period from March 2023 to the present.* However, one (1) collision involved a driver driving under the influence (DUI), one was rear end and the remaining Four (4) were broad side collision. It is important to note that it has only been approximately six (6) months so it would be too early to conclude any definitive trends regarding the lane reduction.

	Before (7 years) (2013-2019)	After (6 months) (March 2023 to present)
Harbor St	8	1 (DUI)
Jillson St	26	5
Washington Blvd	21	0
Total	55	6
High	13 (2019)	N/A
Low	0 (2015)	N/A
Yearly Average	7.9	N/A

The Table below summarizes the time of day when the collisions occurred. They have occurred at all times of the day. Most collisions occurred during the PM peak period of 3 PM to 7 PM.

	Harbor St		Jillson St		Washington Blvd	
	Before (7 years) (2013-2019)	After (6 months) (March 2023 to present)	Before (7 years) (2013-2019)	After (6 months) (March 2023 to present)	Before (7 years) (2013-2019)	After (6 months) (March 2023 to present)
AM Peak	1	0	6	1	2	0
Midday	2	0	8	1	7	0
PM Peak	4	1	11	3	8	0
Night/Early Morning	1	0	1	0	4	0
TOTAL	8	1	26	5	21	0

When reviewing the collision history for each intersection individually, there was no distinct pattern for the collisions at Washington Boulevard and Harbor Street. As shown in the Table below, they varied between sideswipe collisions, rear-end collisions and broadside collisions.

	Harbor St		Jillson St		Washington Blvd	
	Before (7 years) (2013-2019)	After (6 months) (March 2023 to present)	Before (7 years) (2013-2019)	After (6 months) (March 2023 to present)	Before (7 years) (2013-2019)	After (6 months) (March 2023 to present)
Head-On	0	0	0	0	1	0
Sideswipe	1	0	3	0	3	0
Rear-End	2	1	1	2	7	0
Broadside	4	0	21	3	8	0
Other	1	0	1	0	2	0
TOTAL	8	1	26	5	21	0

Based on the attached Collision History Exhibit, there is a clear and distinct pattern for the collision at the Eastern/Jillson intersection. Approximately 73 percent involved an EB or WB vehicle on Jillson Street making a left-turn or through movement colliding with a NB or SB vehicle on Eastern Avenue. As discussed in the attached Signal Warrant Analysis, this intersection met signal warrants based on the collision history. However, it was advised to not install the traffic signal because of its close proximity to the traffic signal at Washington Boulevard. To address collisions at this intersection, it is recommended to restrict the left-turn and through movements on Jillson Street. Drivers on Jillson Avenue could then focus on only one (1) direction of traffic on Eastern Avenue instead of both directions.

Alternative Routes

The attached exhibit shows the most likely selected alternate routes if Jillson Street was restricted to a right-turn only movement.

Based on the additional information provided in this Staff Report and a review of the previous staff presentation at tonight’s meeting of alternative striping plans for Eastern Avenue, **staff recommends Alternative 3 to restripe Eastern Avenue to provide two lanes in each direction and adjust the bike lane to run alongside the curb while not jeopardizing grant funding as the most economical alternative that achieves the most benefits for the City.**

FISCAL IMPACT:

Alternative 3 would cost approximately \$291,000 and could be combined with the next Pavement Management Rehabilitation Program for economies of scale.

The bike lanes were paid for with Federal 5307 Funds in the amount of \$23,400 for the striping, pavement markings, signage, engineering, and construction management as part of a larger project. Should City Council decide to omit bike lanes on Eastern Avenue, staff will need to notify the Federal government of its decision and determine if the money needs to be returned or if it can be reallocated to another qualifying project and also return to Measure AA to request the necessary funding.

Should the City reconsider implementing its Bike and Pedestrian Master Plan and not install bike lanes, the City's proposed class II bike lane project proposed for 2024 on Harbor Street and Commerce Way and funded by CARB will be impacted and it may hinder the City's ability to obtain future grants as many funding agencies are seeking applications promoting complete streets which are bike and pedestrian friendly.

ALTERNATIVES:

1. Approve staff recommendation.
2. Disapprove staff recommendation.
3. Provide further direction to staff.

RELATIONSHIP TO STRATEGIC GOALS:

This agenda item relates to the 2016 Strategic Plan, Infrastructure and Facilities

Guiding Principle 4:

Develop and invest in infrastructure and beautification projects that support economic growth.

Recommended by: Gina Nila, Department of Public Works

Recommended by: Claude McFerguson, Director of Transportation

Approved as to form by: Noel Tapia, City Attorney

Respectfully submitted: Vilko Domic, Assistant City Manager

ATTACHMENTS:

Resolution

Project Limits Aerial Map

Cost Estimate Summary

Alternatives

HCI Report

10-Year Collision Summary

Alternate Routes

Grant funded bike lane map