PM Conformity Hot Spot Analysis – Project Summary for Interagency Consultation

RTIP ID# H9-08-008

TCWG Consideration Date September 27, 2022

Project Description
The project would construct a new traffic signal, widen the existing roadway to accommodate left-turn pockets, construct curbs and gutter, sidewalks, curb ramps, crosswalks, and street lights. The project would implement a new traffic signal at the intersection of Main Street and Sultana Street/Timberlane Avenue, which would include new crosswalks. The anticipated maximum depth of excavation is 13 feet, and the anticipated height of the tallest feature (signal heights) is 30 feet. In addition, the project would construct new 6- to 7-foot sidewalks along the project area in areas where sidewalks are currently not present, and would include new curbs, curb ramps, and gutters. Street and pedestrian lighting would also be included to enhance pedestrian and motor vehicle safety in the project area. The project’s regional location is depicted in Figure 1. The proposed project’s street improvement plans a depicted in Figure 2 and Figure 3. The traffic signal plan is depicted in Figure 4.

Construction of the project would result in four east-west travel lanes along Main Street, including two 12-foot lanes in each direction, one 6-foot bicycle lane in each direction, and one 12-foot left-turn lane. Additionally, the project would implement two north-south travel lanes along Timberlane Avenue and Sultana Street, including one 12-foot lane in each direction, one 5-foot bicycle lane in each direction, and one 12-foot left-turn lane.

One existing utility pole located at the southwest (SW) corner of intersection would be relocated. The City would work with local utility owners for any construction activities on underground facilities, as necessary. Construction of the project, including utility relocation would be anticipated to last approximately four to six months.

Type of Project
- Intersection signalization

County
- San Bernardino

Narrative Location/Route & Postmiles
At the intersection of Main Street and Timberlane Avenue/Sultana Street, between I Avenue and Peach Avenue.

Lead Agency: Caltrans District 8 / City of Hesperia

Contact Person
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Fax #
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Hot Spot Pollutant of Concern (check one or both)  PM2.5  PM10 X

Federal Action for which Project-Level PM Conformity is Needed (check appropriate box)
- Categorical Exclusion (NEPA)
- EA or Draft EIS
- FONSI or Final EIS
- PS&E or Construction
- Other

Scheduled Date of Federal Action: 2023
NEPA Assignment – Project Type (check appropriate box)
- Exempt
  - Section 326 – Categorical Exemption
  - Section 327 – Non-Categorical Exemption

Current Programming Dates (as appropriate)

<table>
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<th></th>
<th>PE/Environmental</th>
<th>ENG</th>
<th>ROW</th>
<th>CON</th>
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<tbody>
<tr>
<td>Start</td>
<td>2017</td>
<td>2020</td>
<td>2018</td>
<td>2023</td>
</tr>
<tr>
<td>End</td>
<td>2022</td>
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<td>2019</td>
<td>2024</td>
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Project Purpose and Need (Summary): (attach additional sheets as necessary)

Project Purpose
The purpose of the project is to improve safety at the intersection of Main Street and Sultana Street/Timberlane Avenue in the City of Hesperia with the installation of traffic signals, widened roadways, and pedestrian facilities. The project's regional location is depicted in Figure 1. The proposed project's site plan is depicted in Figure 2.

Project Need
The intersection at Main Street and Sultana Street/Timberlane Avenue has been identified by the City as the top safety priority due to numerous vehicular collisions and fatalities that have occurred since January 2013. This intersection has drawn considerable community concern over the last 10 years.

Surrounding Land Use/Traffic Generators (especially effect on diesel traffic)
Surrounding land uses consist predominantly of residential land uses. No major land uses (e.g., industrial uses) that would have a significant effect on diesel traffic are located in the project vicinity.

Opening Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility
Overall vehicle AADT, truck AADT, and truck percentages for Opening Year 2023 are summarized in Table 2. Delay and LOS for Opening Year 2023 is presented in Table 4. As depicted, the project would not result in a significant increase in overall traffic or truck volumes and would result in overall improvements in intersection LOS.

RTP Horizon Year / Design Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility
Overall vehicle AADT, truck AADT, and truck percentages for Design Year 2040 are summarized in Table 2. Delay and LOS for Design Year 2040 is presented in Table 4. As depicted, the project would not result in a significant increase in overall traffic or truck volumes and would result in overall improvements in intersection LOS.

Opening Year: If facility is an interchange(s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT
Cross-street (Sultana Street/Timberlane Avenue) vehicle AADT, truck AADT, and truck percentages for Opening Year 2023 are presented in Table 2. Opening year intersection traffic volumes are also depicted in Figure 5. As depicted, the project would not result in a significant increase in overall traffic or truck volumes and would result in overall improvements in intersection LOS.

RTP Horizon Year / Design Year: If facility is an interchange (s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT
Cross-street (Sultana Street/Timberlane Avenue) vehicle AADT, truck AADT, and truck percentages for Opening Year 2040 are presented in Table 3. Design year intersection traffic volumes are also depicted in Figure 6. As depicted, the project would not result in a significant increase in overall traffic or truck volumes and would result in overall improvements in intersection LOS.

Describe potential traffic redistribution effects of congestion relief (impact on other facilities)
The proposed project would include operational improvements to the intersection of Main Street and Sultana Street/Timberlane Avenue. The project would not result in a significant increase in overall traffic or truck volumes, nor result in significant impacts to other facilities. Opening year and future design year intersection traffic volumes are depicted in Figures 5 and 6, respectively.
## TABLE 2. Opening Year 2023 Traffic Summary

<table>
<thead>
<tr>
<th>Segment</th>
<th>No-Build Conditions</th>
<th>Build Conditions</th>
<th>Change from No-Build Conditions</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Truck</td>
<td>Truck %</td>
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<tr>
<td>Main Street (West of Intersection)</td>
<td>29,600</td>
<td>836</td>
<td>3%</td>
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<tr>
<td>Main Street (East of Intersection)</td>
<td>28,300</td>
<td>822</td>
<td>3%</td>
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<tr>
<td>Sultana Street</td>
<td>500</td>
<td>27</td>
<td>5%</td>
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<tr>
<td>Timberlane Avenue</td>
<td>1,700</td>
<td>45</td>
<td>3%</td>
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## TABLE 3. Design Year 2040 Traffic Summary

<table>
<thead>
<tr>
<th>Segment</th>
<th>No-Build Conditions</th>
<th>Build Conditions</th>
<th>Change from No-Build Conditions</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Truck</td>
<td>Truck %</td>
</tr>
<tr>
<td>Main Street (West of Intersection)</td>
<td>30,200</td>
<td>853</td>
<td>3%</td>
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<tr>
<td>Main Street (East of Intersection)</td>
<td>28,900</td>
<td>839</td>
<td>3%</td>
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<tr>
<td>Sultana Street</td>
<td>550</td>
<td>29</td>
<td>5%</td>
</tr>
<tr>
<td>Timberlane Avenue</td>
<td>1,800</td>
<td>48</td>
<td>3%</td>
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## TABLE 4. Main Street and Sultana Street/Timberlane Avenue Intersection Capacity Summary

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<tr>
<th>Analysis Scenario</th>
<th>Control Type</th>
<th>A.M. Peak-Hour</th>
<th>Mid-Day Peak-Hour</th>
<th>P.M. Peak-Hour</th>
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<tr>
<td></td>
<td></td>
<td>Delay</td>
<td>LOS</td>
<td>Delay</td>
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<td>Existing Conditions</td>
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<td>Build Design Conditions</td>
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<td>A</td>
<td>9.4</td>
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</table>

SSSC – Side-Street Stop Control  TS – Traffic Signal Control  Delay – Seconds Per Vehicle  LOS – Level of Service
Comments/Explanation/Details (attach additional sheets as necessary)

Under 40 CFR 93.123(b)—PM10 and PM2.5 Hot Spots—the following criteria are utilized to determine the potential for the proposed project to qualify as a Project of Air Quality Concern (POAQC):

(i) **New highway projects that have a significant number of diesel vehicles, and expanded highway projects that have a significant increase in the number of diesel vehicles;**

   In comparison to no-build conditions, the proposed build alternative would not significantly increase the number of diesel vehicles operating within the project study area. Refer to Table 2.

(ii) **Projects affecting intersections that are at Level-of-Service D, E, or F with a significant number of diesel vehicles, or those that will change to Level-of-Service D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project;**

   As noted above and depicted in Tables 2 and 3, the project would not result in significant increases in overall traffic or truck volumes along area roadways. As depicted in Tables 4, the proposed build alternative would not result in significant changes in intersection operations and would result in overall improvements in intersection LOS. Based on this information, the proposed build alternative would not significantly increase the number of diesel vehicles operating within the project study area, nor would the proposed build alternative adversely impact nearby intersections that have a significant number of diesel vehicles. Opening year and future design year intersection traffic volumes are also depicted in Figures 3 and 4, respectively.

(iii) **New bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location;**

   The project is not a new or expanded bus or rail terminal, nor would the project adversely impact transfer points that have a significant number of diesel vehicles congregating at a single location.

(iv) **Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location; and**

   The project is not a new or expanded bus or rail terminal, nor would the project adversely impact transfer points that have a significant number of diesel vehicles congregating at a single location.

(v) **Projects in or affecting locations, areas, or categories of sites which are identified in the PM10 or PM2.5 applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.**

   The proposed build alternative is not located in, nor would it affect locations, areas, or categories of sites that are identified in the PM2.5 and PM10 applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.

For the reasons noted above, the proposed project would not be considered a POAQC.
FIGURE 1. Regional Location
FIGURE 2. Project’s Street Improvement Plan SI-1
FIGURE 5. Opening Year 2023 Traffic Volumes

FIGURE 6. Future Design Year 2040 Traffic Volumes

## FTIP Project Listing


### Table of FTIP Projects

<table>
<thead>
<tr>
<th>Project ID</th>
<th>Agency</th>
<th>Description</th>
<th>Status</th>
<th>Year</th>
<th>Expected Cost</th>
<th>Federal Funds</th>
<th>State Funds</th>
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<tr>
<td>H9-08-008</td>
<td>SCAG</td>
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### Diagram

- **H9-08-008:**
  - **Project:** The intersection of Main Street and Timberlane Avenue/Granite Street.
  - **Description:** Install a traffic signal; widen roadway to accommodate left turn pockets; install curb, gutter, sidewalk, curb ramps, crosswalks, and lighting; provide pedestrian phasing and countdown timers.
  - **Expected Cost:** $1,214,300

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Version 5.0

February 26, 2013