

**CITY OF TEMECULA  
AGENDA REPORT**

**TO:** City Manager/City Council

**FROM:** Patrick Thomas, Director of Public Works/City Engineer

**DATE:** October 24, 2023

**SUBJECT:** Approve Stop Controls and Pedestrian Analysis for Mercedes Street Between 6th Street and 3rd Street

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**PREPARED BY:** Anissa Sharp, Management Assistant  
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**RECOMMENDATION:** That the City Council:

1. Adopt a resolution entitled:

RESOLUTION NO.

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF TEMECULA, ESTABLISHING AN ALL-WAY STOP CONTROL AT THE INTERSECTIONS OF MERCEDES STREET AND 5TH STREET AND MERCEDES STREET AND 4TH STREET AND FINDING THAT THE ACTION IS EXEMPT FROM CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) UNDER SECTION 15301(C) OF THE CEQA GUIDELINES

2. Recommend staff implement striped pedestrian crosswalks at intersections of Mercedes Street/6<sup>th</sup> Street, Mercedes/5<sup>th</sup> Street, Mercedes/4<sup>th</sup> Street, and Mercedes/3<sup>rd</sup> Street along with adoption of Multi-Way Stop Controls.

**BACKGROUND:** To improve circulation and pedestrian safety in the downtown area, City of Temecula staff were requested to review the Mercedes Street corridor from 6<sup>th</sup> Street to 3<sup>rd</sup> Street. Due to the number of special events and lack of controlled and convenient crosswalk locations across Mercedes Street, the City wanted to explore options for pedestrian improvements. After a field review of the corridor, Staff determined that pedestrian crosswalks could be implemented at existing all-way stop sign locations on Mercedes Street. Additionally, Staff determined that the intersections of Mercedes Street/5<sup>th</sup> Street and Mercedes Street/4<sup>th</sup> Street warranted further analysis for stop and pedestrian controls.

Mercedes Street is a forty (40) foot wide local roadway providing access to businesses and residential streets in the downtown area. The posted speed limit on Mercedes Street is 25 MPH and the Average Daily Traffic (ADT) volume on is approximately 3,000 ADT. Recent speed data collection confirmed an 85<sup>th</sup> percentile speed of 20 MPH for this stretch of Mercedes Street.

6<sup>th</sup> Street is a forty (40) foot wide local roadway providing access to business and residential units in the downtown area. 6<sup>th</sup> Street has a speed limit of 25 MPH and carries approximately 850 ADT.

5<sup>th</sup> Street is a forty (40) foot wide local roadway providing access to business and residential units in the downtown area. 5<sup>th</sup> Street has a speed limit of 25 MPH and carries approximately 830 ADT.

4<sup>th</sup> Street is a forty (40) foot wide local roadway providing access to business and residential units in the downtown area. 4<sup>th</sup> Street has a speed limit of 25 MPH and carries approximately 870 ADT.

3<sup>rd</sup> Street is a forty (40) foot wide local roadway providing access to business and residential units in the downtown area. 3<sup>rd</sup> Street has a speed limit of 25 MPH and carries approximately 1,060 ADT.

In September 2023, staff generated speed and volume data for the months of April 2022 and September 2022 using Streetlight Data software. Over this two (2) month period, review of prevailing (85<sup>th</sup> percentile) speeds indicates that speeds vary from 15 to 20 miles per hour during peak AM and PM hours on posted 25 MPH segments of Mercedes Street and accompanying side streets. The results of the speed data review indicate that there is not a speeding issue along the downtown corridors.

The collected volume data was used to evaluate entering volumes and prevailing speeds for the intersections of Mercedes Street/5<sup>th</sup> Street and Mercedes/4<sup>th</sup> Street. In addition to the data collection, a review of intersection characteristics and conditions was performed, which included an evaluation of sight distance, collision history, and completion of a multi-way stop warrant analysis at both intersections.

An evaluation of sight distance was performed at the intersections of Mercedes Street/5<sup>th</sup> Street and Mercedes/4<sup>th</sup> Street. A minimum unobstructed sight distance of 155 feet is required for the posted 25 mph speed limit on Mercedes Street. The results of the evaluation are shown in the table below:

<i>Mercedes Street/5<sup>th</sup> Street Location</i>	<i>Sight Distance</i>	<i>Required Visibility (Posted 25 MPH)</i>
<u>5<sup>th</sup> Street (Eastbound)</u>		
• Looking North	<b>90'</b>	<b>155'</b>
• Looking South	<b>140'</b>	<b>155'</b>
<u>5<sup>th</sup> Street (Westbound)</u>		
• Looking North	<b>115'</b>	<b>155'</b>
• Looking South	<b>90'</b>	<b>155'</b>

<i>Mercedes Street/4<sup>th</sup> Street Location</i>	<i>Sight Distance</i>	<i>Required Visibility (Posted 25 MPH)</i>
<u>4<sup>th</sup> Street (Eastbound)</u>		
• Looking North	<b>90'</b>	<b>155'</b>
• Looking South	<b>115'</b>	<b>155'</b>
<u>4<sup>th</sup> Street (Westbound)</u>		
• Looking North	<b>115'</b>	<b>155'</b>
• Looking South	<b>115'</b>	<b>155'</b>

As shown, the visibility at the intersections of Mercedes Street/5<sup>th</sup> Street and Mercedes Street/5<sup>th</sup> Street does not meet required visibility for any side street movement for the posted speed limit. The reason for subpar sight visibility is due to parked cars on Mercedes Street.

A review of the collision history for the three (3) year period from September 1, 2020 to September 30, 2023, indicates there were three (3) reported collisions at the intersection of Mercedes Street/5<sup>th</sup> Street. The accidents were property only damage accidents.

A review of the collision history for the three (3) year period from September 1, 2020 to September 30, 2023, indicates there were two (2) reported collisions at the intersection of Mercedes Street/4<sup>th</sup> Street. The accidents were property only damage accidents.

The Multi-Way Stop Sign Installation Policy for Residential Streets' warrant criteria was used to evaluate the need for multi-way stop signs at the intersection. The warrants allow for the installation of multi-way stop signs when the following conditions are satisfied:

1. Minimum Traffic Volumes
  - a. The total vehicular volume entering the intersection from all approaches is equal to or greater than three hundred (300) vehicles per hour for any eight (8) hours of an average day; and
  - b. The combined vehicular volume and pedestrian volume from the minor street is equal to or greater than one hundred (100) per hour for the same eight (8) hours.
2. Collision History
  - a. Three (3) or more reported collisions within a twelve (12) month period of a type susceptible to correction by a multi-way stop installation. Such accidents include right and left-turn collisions as well as right-angle collisions.
3. Roadway Characteristics
  - a. The traffic volume on the uncontrolled street exceeds two thousand (2,000) vehicles per day,

- b. The intersection has four (4) legs, with the streets extending 600 feet or more away from the intersection on at least three (3) of the legs.
- c. The vehicular volumes on both streets are nearly equal to a forty/sixty percent (40/60%) split; and
- d. Both streets are 44 feet wide or narrower.

Warrants for Minimum Traffic Volumes, Collision History and Roadway Characteristics must be met to justify the installation of a multi-way stop. Other criteria that may be considered when evaluating the need for multi-way stop signs include:

4. Visibility
  - a. The intersections sight distance is less than:
    - 150 feet for 25 MPH
    - 200 feet for 30 MPH
    - 250 feet for 35 MPH
5. The need to control left-turn conflicts.
6. The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes such as schools, parks and activity centers.
7. The roadways and intersection appear on a Suggested Route to School plan.
8. There are no traffic signals or all-way stop controls located within 600 feet of the intersection.
9. The installation of multi-way stop signs is compatible with overall traffic circulation needs of the residential area.

The multi-way stop warrant analysis performed found that the required Warrants 1, 2 & 3 were not satisfied and all-way stop controls are not justified at the intersection based on quantitative data.

However, the policy does provide the flexibility to consider the need to control vehicle and pedestrian conflicts near locations that generate high pedestrian volumes such as business districts, parks, and activity centers. During field reviews, staff noticed elevated amounts of pedestrian traffic throughout the day on Mercedes Street accessing City Hall, the Sam Hicks Memorial Park, and downtown businesses. These pedestrians typically crossed at random uncontrolled locations on Mercedes Street. The Policy also allows the consideration to control vehicle and pedestrian conflicts near locations where visibility constraints occur. Based on the review of the intersections under these criteria of high pedestrian activity combined with visibility constraints, staff has determined there is justification for all-way stop controls at the intersections of Mercedes Street/5<sup>th</sup> Street and Mercedes Street/5<sup>th</sup>.

For the locations of Mercedes Street/6<sup>th</sup> Street, Mercedes Street/5<sup>th</sup> Street, Mercedes Street/4<sup>th</sup> Street, Mercedes Street/3<sup>rd</sup> Street, staff recommends installation of striped pedestrian crosswalks to increase pedestrian visibility and safety. Implementation of these crosswalks may require installation of upgraded ADA compliant curb ramps but that will be completed on an as-needed basis and as funding becomes available.

Staff recommends establishing all-way stop controls and striped pedestrian crosswalks at the intersections of Mercedes Street/5<sup>th</sup> Street and Mercedes Street/4<sup>th</sup>.

Staff also recommends installation of striped pedestrian crosswalks at the existing all-way stop intersections of Mercedes Street/6<sup>th</sup> Street and Mercedes Street/3<sup>rd</sup>.

**FISCAL IMPACT:** Minor cost associated with the recommended action.

**ATTACHMENTS:**

1. Resolution
2. Mercedes Crosswalk Views
3. Multi-Way Stop Warrant Analysis
4. Collision Summary Report