



## CITY OF COMMERCE AGENDA REPORT

**Item No. 3**

**TO:** Traffic Commission

**SUBJECT:** TRAFFIC CALMING MEASURES ALONG TRIGGS STREET  
BETWEEN BONNIE BEACH PLACE AND MCDONNELL AVENUE

**MEETING DATE:** November 9, 2016

---

### **RECOMMENDATION:**

Approve the recommended traffic calming measures which includes striping, curb markings, signage, edge lines, new center line, and other traffic calming measures along Triggs Street between Bonnie Beach Place and McDonnell Avenue.

### **BACKGROUND:**

Engineering staff has completed a traffic analysis to evaluate a request for traffic calming measures to mitigate speeding concerns along the corridor on Triggs Street between Bonnie Beach Place and McDonnell Avenue in the City of Commerce. The subject area is a residential neighborhood with single family homes. Triggs Street is classified as a collector street which are roadways which connect traffic on residential streets to adjacent higher capacity roadways. Triggs Street has a posted speed limit of 25 mph per the 2008 Engineering and Traffic Survey (Speed Zone Study) for the Triggs Street segment.

Triggs Street, between Marianna Avenue and Bonnie Beach Place, is in the East Los Angeles jurisdiction of Los Angeles County. The City will provide outreach to the County and request participation with the City of Commerce for this traffic calming mitigation. Regardless of the outcome with the County, the City will proceed with this traffic calming mitigation, upon the approval of the Traffic Commission and the City Council.

Triggs Street carries approximately 4,500 vehicles per day (vpd). Triggs Street allows parking on both sides and provides one lane in each direction. There are two all-way stop control locations at Eastern Avenue and Triggs Street and at McDonnell Avenue and

Triggs Street. The rest of the intersecting streets are two-way stop controlled. Triggs Street is 40' (feet) in width and carries one lane in each direction, there is no center stripe.

To note, the City requested to the County to have the I-710 overpass interior lights to be constantly lit as a matter of public safety. The lights are now turned on 24 hours a day, 7 days a week.

## **ANALYSIS:**

Accident data was obtained from the computerized accident records system maintained by the State of California Statewide Integrated Traffic Records System (SWITRS). Data was obtained for the past 5.5 years between 2016 (available data) and 2011 along Triggs Street between Bonnie Beach Place and McDonnell Avenue There was a total of 15 accidents.

**2016-present:** 1 recorded accident

**2015:** 0 recorded accidents

**2014:** 1 recorded accident

**2013:** 4 recorded accidents

**2012:** 3 recorded accidents

**2011:** 2 recorded accidents

**Table 1: Collision Summary List**

No	DATE	PRIMARY ROAD / SECONDARY ROAD	DIST.	COLLISION TYPE	SEVERITY	FACTOR	PCF VIOLATION
1	3/1/2016	MCBRIDE AV / TRIGGS ST	6'S	AUTO/PED	INJ	SB LFT TURN VEH HIT WB THRU PED	10 - PEDESTRIAN RIGHT OF WAY
2	12/28/2014	TRIGGS ST / MCDONNELL AV	240'E	REAR END	PDO	WB THRU VEH HIT WB PARKED VEH	08 - IMPROPER TURNING
4	12/5/2013	TRIGGS ST / MCDONNELL AV	20'E	REAR END	PDO	EB THRU VEH HIT EB PARKED VEH (X3)	08 - IMPROPER TURNING
5	11/22/2013	TRIGGS ST / EASTERN AV	25'E	REAR END	PDO	WB THRU VEH HIT WB STOPPED VEH	08 - IMPROPER TURNING
6	7/7/2013	TRIGGS ST / MCDONNELL AV	60'W	SIDESWIPE	PDO	WB THRU VEH HIT EB PARKED VEH (X2)	01 - DRIVING OR BICYCLING UNDER THE INFLUENCE OF ALCOHOL OR DRUG
7	1/29/2013	TRIGGS ST / SYDNEY DR	45'W	SIDESWIPE	PDO	EB THRU VEH HIT EB PARKED VEH (X2)	03 - UNSAFE SPEED
8	12/14/2012	TRIGGS ST / EASTERN AV	0	BROADSIDE	PDO	WB THRU VEH HIT LFT TURN BICY	12 - TRAFFIC SIGNALS AND SIGNS
9	12/3/2012	TRIGGS ST / SYDNEY DR	40'W	SIDESWIPE	PDO	EB THRU VEH HIT EB PARKED VEH	08 - IMPROPER TURNING
12	8/14/2012	TRIGGS ST / DUNCAN AVE	0	REAR END	PDO	WB UNS TURN VEH HIT WB PARKED VEH	01 - DRIVING UNDER THE INFLUENCE OF ALCOHOL OR DRUG
14	9/5/2011	TRIGGS ST / MCDONNELL AV	234'E	BROADSIDE	INJURY (OTH VIS)	NB ENT TRAF VEH HIT WB WRONG WY BICY	05 - WRONG SIDE OF ROAD
15	8/3/2011	TRIGGS ST / MCDONNELL AV	40'W	REAR END	INJURY (COMP PN)	EB THRU VEH HIT EB STOPPED VEH	03 - UNSAFE SPEED

**Figure 1. Collision Diagram (Triggs Street Between Bonnie Beach Place and McDonnell Avenue)**  
*All data is a direct output from the Statewide Integrated Traffic Record System (SWITRS)*



**LEGEND**

SEVERITY OF CRASH	# of Crashes
Fatality (Death)	0
Injury	4
Property Damage Only	12
<b>Total Accidents</b>	<b>16</b>

CRASH TYPE INVOLVING	# of Crashes
Vehicle	4
Parked Vehicle	9
Pedestrian/ Bike	3
<b>Total Accidents</b>	<b>16</b>



Traffic calming is the process of reducing vehicle speeds through the use of both passive devices, such as signs and striping, and physical devices such as changes in road elevation or path. The type, design and placement of traffic calming devices depend upon the road classification, desired traffic speed and types of traffic issues along the corridor. The first step is to do a comprehensive study of existing conditions. This includes a review of accidents history, geometric field review, field inventory of existing traffic control and conditions as well as traffic volumes. All of this was used to assess existing conditions along the Triggs Street segment.

There are a number of ways to address traffic speeds. A single traffic calming device placed along a long stretch of road will be marginally effective at slowing down speeds at that isolated location but implementation of a series of traffic calming devices that work cohesively together will effectively slow down traffic speeds along the length of a corridor.

Some effective traffic calming measures are as follows:

- 1) **Striping:** Modifying or changing the striping to narrow travel lanes, effectively slows speeds by changing the travel environment. Narrower lanes create “friction” and thereby cause Drivers to travel at a slower pace. To aid in slowing through traffic, a white stripe is painted along both sides of the travel way to give the Driver a perception of a narrower road. This has been used in adjacent cities and in documented surveys (traffic calming sources<sup>1</sup>) this has shown to be an effective device for reducing travel speeds.



*Example of white striping for the perception of a narrower road.*



*Example of white striping for the perception of a narrower road.*

- 2) **Signage and Pavement Legends:** Signs alert Drivers to their speed, such as larger speed limit signs or a speed feedback sign. Too many signs can have an opposite effect on traffic. Therefore, usage of signs should be subject to careful consideration and compliance with local and regional standards. Speed and stop ahead pavement legends alert Drivers of a change in traffic conditions. Speed limit signs and striped

<sup>1</sup>Guide for the Planning, Design and Operation of Pedestrian Facilities, AASHTO, July 2004 and PEDSAFE: Pedestrian Safety and Countermeasures Selection System, USFHWA, 2004

speed limit pavement “messages,” either used separately or as a combination, are one of the most cost effective measures in increasing awareness of motorists traveling through a neighborhood street.

Installation of larger dimensioned signs are recommended as treatments to increase motorist’s awareness by highlighting various areas of the roadway. All sign dimensions should comply with the dimensions specified in the California Manual of Uniform Traffic Control Devices (CAMUTCD) Table 2B-1 Regulatory Sign and Plaque Sizes. The larger sizes are shown in the multi-lane column as 36”x36” for stop signs and 30”x36” for speed limits.

**Table 2B-1. Regulatory Sign and Plaque Sizes (Sheet 1 of 4)**

Sign or Plaque	Sign Designation	Section	Conventional Road		Expressway	Freeway	Minimum	Oversized
			Single Lane	Multi-Lane				
Stop	R1-1	2B.05	30 x 30*	36 x 36	36 x 36	—	30 x 30*	48 x 48
Speed Limit	R2-1	2B.13	24 x 30*	30 x 36	36 x 48	48 x 60	18 x 24*	30 x 36

- 3) Red Curb Marking to Improve Sight Visibility: In an effort to reduce and prevent head-on and side-swipe collisions emanating from residential streets such as Duncan Avenue, Sydney Drive, etc., red curb markings will be judiciously placed at certain corners of Triggs Street that will allow for improved sight visibility as drivers are making their turns onto Triggs Street.
- 4) Targeted Police Enforcement: The police department deploys officers to perform enforcement on residential streets for at least an hour a day. The goal is to make Drivers aware of the speed limits and reduce speeds. This requires the cooperation and dedication of police enforcement. This has been shown to be a good spot enforcement technique.

## RECOMMENDATIONS

Below are the recommended traffic calming measures that can reduce the flow and speed of traffic along the subject roadway segment.

1. The police or sheriff’s department should be made aware of speeding concerns along this segment of roadway and send officers to perform spot enforcement to aid and increase drivers’ awareness of the speed limits.
2. Remove the NO PARKING SIGNS from the STOP sign poles for the SB direction at Marianna Avenue. This detracts from the visibility of the Stop sign. Per CAMUTCD no other signs besides warning signs should be placed with a Stop. Stop signs should have a minimum height of 7’ (feet) per CAMUTCD 2A.18.
3. Repaint all faded red curb markings along Triggs Street.

4. Repaint all existing striping, pavement legends, and yield lines all STOP CONTROL intersections along Triggs Street.
5. Repaint all faded yellow center lane striping.
6. Repaint all crosswalks with white ladder striping. Crosswalk locations at Eastern Avenue, McBride Avenue, and McDonnell Avenue per CAMUTCD Figure 3B.19.
7. Replace all existing STOP signs with larger STOP signs (36"x36") since there is heavy parking along Triggs Street. Follow guidelines per CAMUTCD 2B.05. The larger signs will increase visibility.
8. Install "CROSS TRAFFIC DOES NOT STOP" sign (W4-4P) per the CAMUTCD 2C.59. Underneath all two-way STOP signs



9. Install 6' (feet) of Red Curb at each curb return on all corners along Trigg Street to prohibit parking in the curb returns. This is per CAMUTCD 3B.19.
10. Install and paint a center single yellow stripe along Triggs Street between Bonnie Beach Place and McDonnell Avenue. This will give the motorists the perception of a narrower travel lane which will slow traffic. This is per CAMUTCD 3B.01.
11. Install a white side stripe (edge lane) 8' (feet) from the curb on both sides of Trigg Street. This is a lane narrowing technique that has been shown to calm traffic while providing the least amount of impact to area residents. Parking will not be affected.
12. Install at least 50' (feet) of yellow center line single stripe on all side streets approaching Triggs Street from both directions.
13. Install 25 MPH signs on Triggs Street at major cross streets per CAMUTCD 2B.13. The locations should be east of Bonnie Beach Place and Eastern Avenue for the EB direction and west of McDonnell Avenue and Eastern Avenue for the WB direction.
14. Install NO PARKING OVERSIZE VEHICLES (R28-D) under the 710 Freeway underpass. This will prohibit large vehicles from parking and blocking traffic.

#### **ALTERNATIVES:**


1. Approve staff recommendation
2. Reject staff recommendation
3. Provide staff with further direction

**FISCAL IMPACT:**

On September 10, 2015, the Measure “AA” Committee approved \$75,000 in funding for traffic study and improvement work for Triggs Street and Duncan Avenue. The funding was subsequently approved by City Council on August 11, 2015.

The traffic calming measures that are proposed to be implemented are estimated to be \$25,000, and the funding that was appropriated by the Measure “AA” Committee and the City Council is deemed adequate. Any anticipated shortfall will be addressed to the Measure “AA” Committee and to the City Council.

Respectfully submitted,

  
*for* Maryam Babaki, P.E.  
Director of Public Works &  
Development Services

Recommended by:  
Seung Yang  
*Interim Traffic Commission Liaison*

Prepared by:  
Transtech Engineers, Inc.

**ATTACHMENTS:**

Attachment 1: Proposed Traffic Calming Diagram on Triggs Street



CITY OF COMMERCE

***Proposed Traffic Calming Measures on Triggs Street between Bonnie Beach Place and McDonnell Avenue***

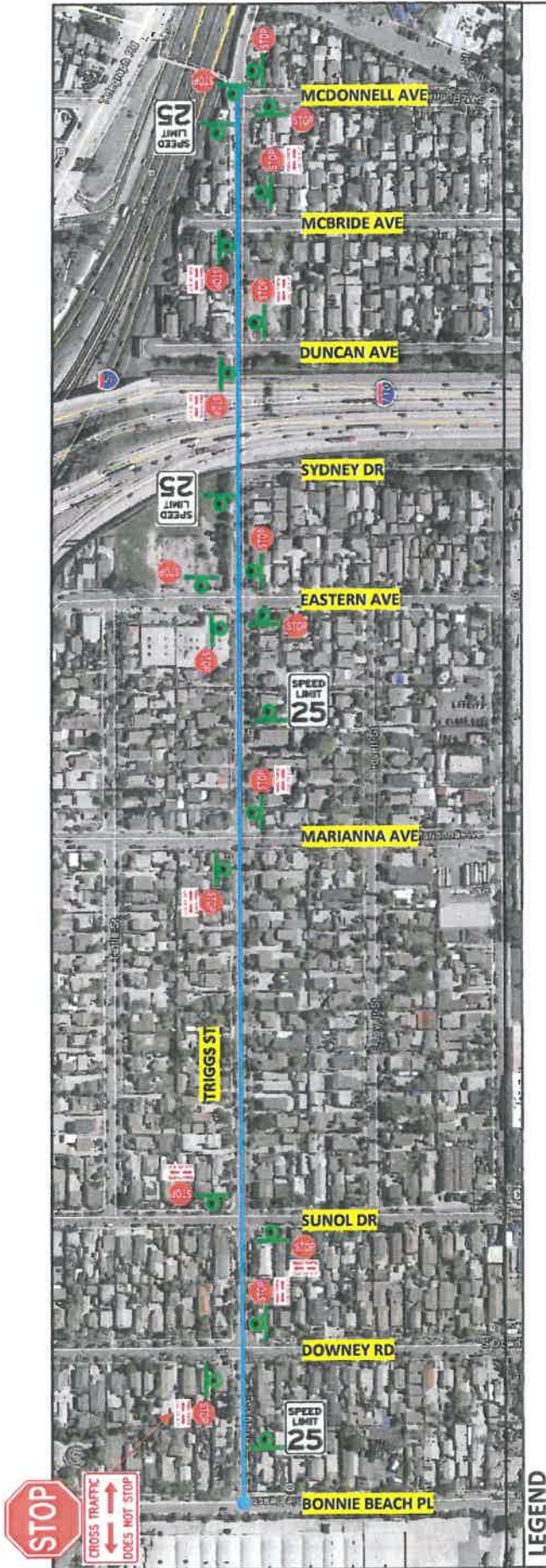
**BEFORE IMPROVEMENTS: EXAMPLE OF EDGE LINE AND CENTER STRIPE**



**Existing Conditions on Triggs Street:**

- No center stripe
- One travel lane in each direction with parking allowed on both sides
- 40' width roadway
- Collector street
- Posted 25 mph speed limit
- 4,500 vehicles per day
- 15 reported accidents between 2011-2016 (available data) along Triggs Street between Bonnie Beach Place and McDonnell Avenue

# Proposed Traffic Calming Measures on Triggs Street between Bonnie Beach Place and McDonnell Avenue

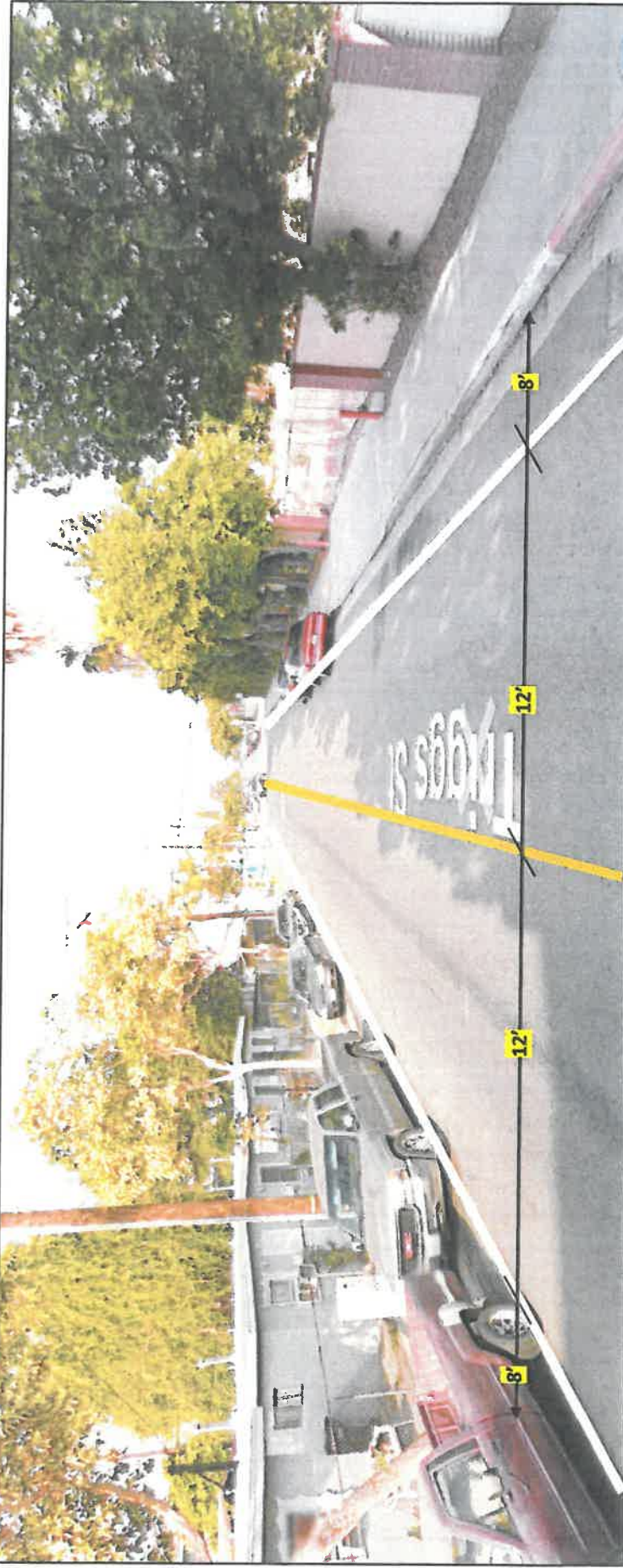


1. Install and paint a center single yellow stripe along Triggs Street between Bonnie Beach Place and McDonnell Avenue. This will give the motorists the perception of a narrower travel lane which will slow traffic. This should be per CAMUTCD 3B.01.
2. Install a white side stripe (edge lane) 8' (feet) from the curb on both sides of Triggs Street. This is a lane narrowing technique that has shown to calm traffic. Parking will not be impacted.
3. Install at least 50' (feet) of yellow center line single stripe on all side streets approaching Triggs Street from both directions.
4. Install 25 MPH signs at major cross streets on Triggs Street per CAMUTCD 2B.13. The locations should be east of Bonnie Beach Place, EB direction for Eastern Avenue and WB direction at McDonnell Avenue and Eastern Avenue.
5. Install NO PARKING OVERSIZE VEHICLES (R28-D) under the 710 Freeway underpass. post NO PARKING OVERSIZE VEHICLES. This will prohibit large vehicles from parking and blocking traffic.
6. Install red curb markings at certain intersections along Triggs Street to improve sight visibility.
6. Remove the NO PARKING SIGNS from the STOP sign poles for the SB direction at Marianna Avenue. Stop signs should have a minimum height of 7' (feet) per CAMUTCD 2A.18
7. Repaint all faded red curb markings along Triggs Street.
8. Repaint all existing striping, pavement legends, and yield lines all STOP CONTROL intersections along Triggs Street
9. Repaint all faded yellow center lane striping
10. Repaint all crosswalks with white ladder strip. Crosswalk location at Eastern Avenue, McBride Avenue, and McDonnell Avenue per CAMUTCD Figure 3B.19.
11. Replace all existing STOP signs with larger STOP signs (36"x36") since there is heavy parking along Triggs Street. Follow guidelines per CAMUTCD 2B.05. The larger signs will increase visibility.
12. Install "CROSS TRAFFIC DOES NOT STOP" sign (W4-4P) per the CAMUTCD 2C.59. Underneath all two-way STOP signs
13. Install 6' (feet) of Red Curb at each curb return on all corners along Triggs Street to prohibit parking in the curb returns. This is per CAMUTCD 3B.19.



***Proposed Traffic Calming Measures on Triggs Street between Bonnie Beach Place and McDonnell Avenue***

***AFTER IMPROVEMENTS: EXAMPLE OF EDGE LINE AND CENTER STRIPE***



**Proposed Conditions:**

- **Install** and paint a center single yellow stripe along Triggs Street between Bonnie Beach Place and McDonnell Avenue. This will give the motorists the perception of a narrower travel lane which will slow traffic. This should be per CAMUTCD 3B.01.
- **Install** a white side stripe (edge lane) 8' (feet) from the curb on both sides of Triggs Street. This is a lane narrowing technique that has shown to calm traffic. Parking will not be impacted.



***Examples of white striping for the perception of a narrower road.***