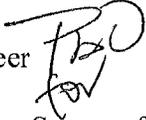


SAFETY COMMISSION AGENDA STATEMENT

Item 1
Meeting Date 10/02/19

ITEM TITLE: RESOLUTION OF THE SAFETY COMMISSION OF THE CITY OF CHULA VISTA RECOMMENDING THAT THE CHULA VISTA CITY COUNCIL INCREASE THE EXISTING SPEED LIMIT ON EAST 'H' STREET BETWEEN SOUTHWESTERN DRIVE AND OTAY LAKES ROAD FROM 35 MPH TO 45 MPH, AND THAT SCHEDULE X OF THE REGISTER MAINTAINED IN THE OFFICE OF THE CITY ENGINEER BE AMENDED TO REFLECT THIS SPEED LIMIT

SUBMITTED BY: Principal Traffic Engineer 

Staff completed an Engineering and Traffic Survey for a segment on East 'H' Street in accordance with the California Vehicle Code, which indicates that the posting of speed limits be determined by an Engineering and Traffic Survey (E&TS) for each street with a posted speed limit within the City (with some exceptions). A previous E&TS was conducted in 2007 on East 'H' Street, between Buena Vista Way and Southwestern Drive, resulted in a posted speed limit of 45 mph and is now expired.

An E&TS conducted in 2003 on East 'H' Street, between Southwestern Drive and Otay Lakes Road, resulted in a posted speed limit of 35 mph and is now expired. Since this segment is 0.167 miles, it is proposed to combine this segment with the segment to the west (see Attachment, combined Segments 1 and 2). The Manual on Uniform Traffic Control Devices (MUTCD) states that speed zones less than 0.5 miles should be avoided. The new E&TS conducted on E. 'H' Street from Buena Vista Way to Otay Lakes Road determined that the posted speed limit on East 'H' Street should be 45 mph. The shorter segment from Southwestern Drive to Otay Lakes Road is proposed to be increased from 35 mph to 45 mph.

RECOMMENDATION: Safety Commission concur with staff and recommend that the Chula Vista City Council increase the existing speed limit on East 'H' Street, between Southwestern Drive and Otay Lakes Road from 35 mph to 45 mph, thus making a continuous segment with 45 mph speed limit from Buena Vista Way to Otay Lakes Road, and that Schedule X of the register maintained in the Office of the City Engineer be amended to reflect this speed limit

DISCUSSION:

The California Vehicle Code (CVC) establishes minimum and maximum prima facie speed limits for all streets in the State. The minimum prima facie speed limit is 25 miles per hour (MPH) and the maximum speed limit is 65 MPH and an E&TS is required to change the prima facie speed limits in the City.

The CVC requires that local agencies review changes in local speed limits every five to ten years to determine if the existing street segment speed limits require updating due to the age of the engineering and traffic survey or due to changes in roadway and traffic conditions.

Currently, the existing posted speed limit on East ‘H’ Street, between Buena Vista Way and Southwestern Drive is 45 mph (Segment 1). The existing posted speed limit on East “H” Street between Southwestern Drive and Otay Lakes Road is 35 mph (Segment 2). The E&TS for both segments have expired, and roadway conditions are consistent between both segments.

City staff completed a speed survey for above segments in accordance with the California Vehicle Code. As described in the California Vehicle Code, the survey shall include:

- (1) Prevailing speeds as determined by traffic engineering measurements;
- (2) Accident records;
- (3) Traffic/roadside conditions not readily apparent to the driver.

Physical Conditions

The following information describes the existing conditions along East ‘H’ Street between Buena Vista Way and Otay Lakes Road:

- Classification Between Buena Vista Way and Otay Lakes Road – Six Lane Major.
- Length/Width – 2,444 feet (0.46 miles) long and 84’ to 113’ wide, including raised median.
- Average Daily Traffic: 42,997 (2015)
- Number of Lanes: 6 lanes (3 per direction).
- Existing Speed Limits – Posted 45 (Segment 1) and 35 mph (Segment 2).
- 85% Percentile Speed: Segment 1 is 46 mph. Segment 2 is 46 mph.
- Striping – Six lanes of traffic, bike lanes, left-turn and right-turn pockets.
- Parking – Parking is not allowed along both segments.
- Bike Lanes in both directions.
- Horizontal Alignment – Horizontal Curve east of Southwestern Drive with a radius of 2000’ over a length of 557’ yields a design speed over 50 mph.
- Vertical Alignment – Vertical Sag east of Southwestern Drive with a grade change of 4.5% over 500’ indicates a design speed over 50 mph
- Accident Rate History – The accident rate at this segment is 0.32 accidents per million vehicle miles, which is lower than the rate of 1.36 for similar roadways in the State of California.

Traffic Calming

Segment 2 is the only segment with a proposed speed increase. Given its short length and major roadway classification, no traffic calming measures are feasible. The MUTCD recommends that roadway segments be a minimum of 0.25 miles; therefore, a speed increase on Segment 2 and merging it with Segment 1 is the recommended approach.

Traffic Calming Measure	Applicable?	Feasible?	Implemented?
Police SAM Trailer	Y	N	N
Large Signs/Legends	Y	N	N
Narrowed Lanes	N	N	N

Traffic Calming Measure	Applicable?	Feasible?	Implemented?
Striped Chicanes	N	N	N
Permanent Feedback Sign	N	N	N
Speed Cushions	N	N	N
Curb Extensions	N	N	N
Traffic Circles/Diverters	N	N	N

Speed Enforceability

If the proposed speed increase is not approved, the following are the only means of enforcing speed on Segment 2:

- Basic Speed Law: police car matches speed of vehicle and determines that speed is unsafe for current conditions. Infeasible due to insufficient police availability and the segment is too short.
- Maximum Speed Law: use RADAR/LiDAR methods to enforce speed limit of 65 mph.

If the proposed speed limit is approved, police can use RADAR/LiDAR to enforce the approved posted speed limit.

CONCLUSION:

When speed limits are appropriately established the following objectives are achieved:

- Meaningful, unambiguous enforcement
- Voluntary public compliance
- Clear identification of the unreasonable violator
- Elimination of unjustifiable “tolerances” of higher speed travel

Based on the 85th percentile speed of the roadway, as well as a low collision rate outlined in the Engineering/Traffic Survey, staff has determined that the speed limit on East ‘H’ Street between Buena Vista Way and Otay Lakes Road be 45 mph. Segment 1, between Buena Vista Way and Southwestern Drive, is proposed to retain the 45 mph posted speed limit. Segment 2, Southwestern Drive and Otay Lakes Road (Segment 2) is proposed to be increased from 35 mph to 45 mph.

Should the City Council establish the 45 mph speed limit, Schedule X of the register maintained in the Office of the City Engineer be amended to reflect the speed limit increase:

- East ‘H’ Street, Buena Vista Way and ending at Otay Lakes Road, proposed Speed Limit 45 mph.

FISCAL IMPACT:

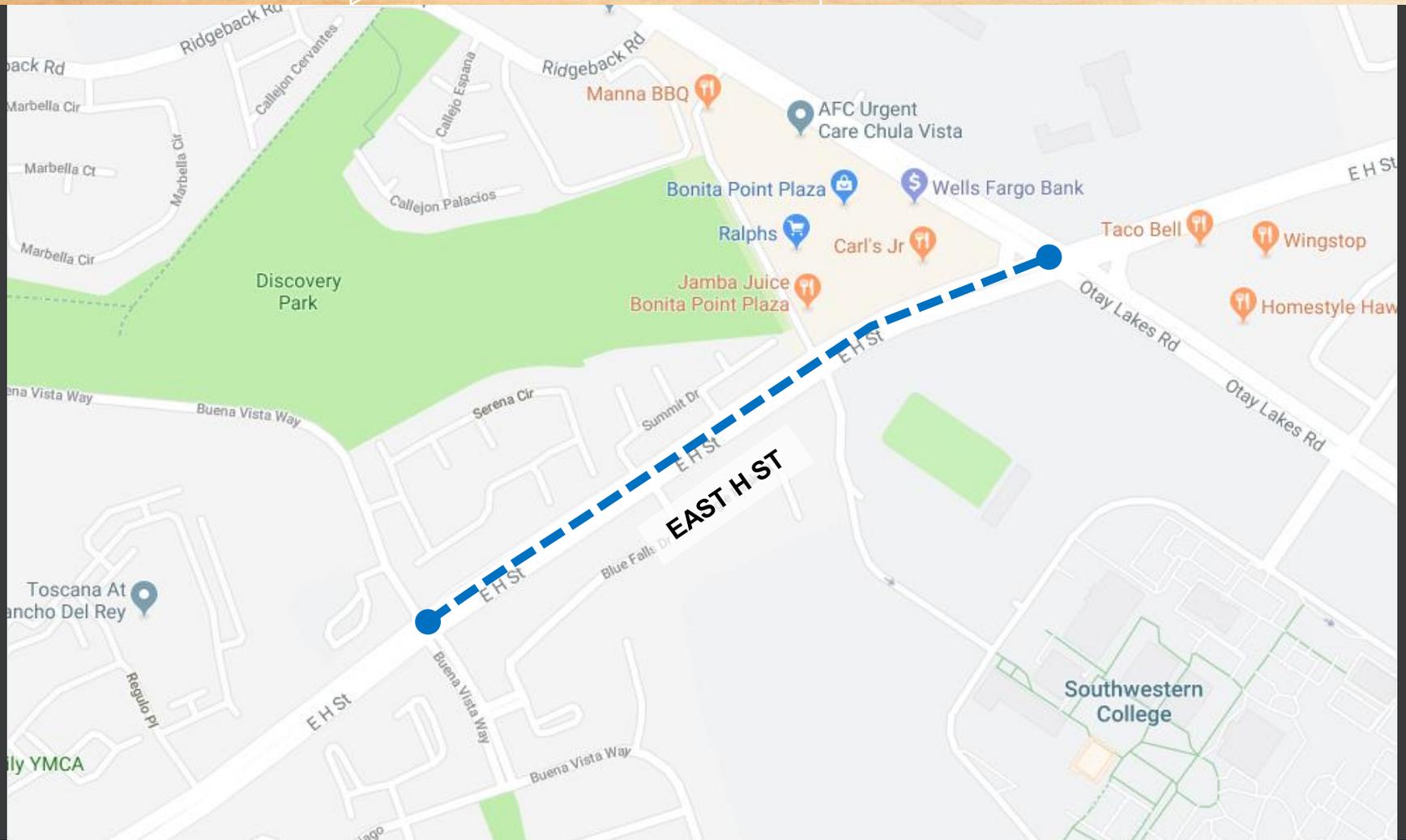
The increase of the speed limit would require the posting of two (2) new speed limit signs and speed limit legends. This work will be funded by an existing Traffic Engineering Capital Improvement Project, TRF0332, Signing and Striping Program.

Attachments:

1. Location Plat
2. Speed Survey



LOCATION MAP



SPEED LIMIT - ENGINEERING/TRAFFIC SURVEY

STREET: East "H" Street

LIMITS: Buena Vista Way - Otay Lakes Rd

Length of Segment (ft): 2,444' (0.46 miles)

SUMMARY OF SPEED SURVEYS

Segment:	Buena Vista Way - SW College Drwy	SW College Drwy - Otay Lakes Rd
Existing Posted Limit (mph):	45	35
Date Taken:	3/4/2019	2/26/2019
No. of Vehicles on Sample (cars):	110	107
85th Percentile (mph):	46	46
Range of Speeds Recorded (mph):	30-50	33-54

ROADWAY CHARACTERISTICS

Width (ft): Varies from 84'-113' curb to curb (with a 4'-21' raised median)

Total No. of Lanes: 6 total lanes (3 per direction)

Horizontal Alignment: Between SW College Drwy to Otay Lakes Rd exists a radius of over 2000' over 557' along the centerline indicating a design speed over 50 mph.

Vertical Alignment: A vertical sag with a grade change of 4.5% over 500' along the centerline indicates a design speed over 50 mph.

TRAFFIC CHARACTERISTICS

Average Daily Traffic: 42,997 (2015)

On-Street Parking: There is no on-street parking allowed

Special Conditions: Bus routes and bike lanes located on both sides of the segment. Bonita Vista High School is located on Otay Lakes Rd and East "H" St. Southwestern College is located on the south of the segment. The Children's Company daycare center is located on the corner of Southwestern College entrance and E "H" Street. Bonita Point Plaza, a collection of commercial and retail businesses, is located along the north side of the segment.

Accident History: The accident rate is 0.32 (accidents per million vehicle miles) which is lower than the rate of 1.36 for similar roadways in the State of California.

SURVEY RESULTS

Study was Prepared by: Nancy Cen

Date:

Recommendation: A 10 mph increase between Southwestern College driveway and Otay Lakes Road to 45 mph due to the 85th percentile speed.

Retain the 45 mph posted speed limit between Buena Vista Way and the driveway

Date Recommendation Approved:

By: Paul Oberbauer, P.E.

Approved Speed Limit (mph):

Per CVC 40803, Survey Expires:

CITY OF CHULA VISTA - VEHICLE SPEED SURVEY

SEGMENT UNDER STUDY: East H Street (Buena Vista Way - Southwestern College Driveway)

DATE: 3/4/2019 SURVEY SITE: Mid-block POSTED SPEED: 45

TIME START: 2:52 PM TIME END: 3:13 PM WEATHER: Cloudy

MPH	DIRECTION: <u>WB</u> = 0 <u>EB</u> = \														TOTAL	%	CUM %
	5				10				15				20				
60															0	0%	100%
59															0	0%	100%
58															0	0%	100%
57															0	0%	100%
56															0	0%	100%
55															0	0%	100%
54															0	0%	100%
53															0	0%	100%
52															0	0%	100%
51															0	0%	100%
50	0														1	1%	100%
49	/	0													2	2%	99%
48	/	0	0												3	3%	97%
47	/	/	/	0	0	0									6	5%	95%
46	/	/	/	/	0	0	0	0	0						9	8%	89%
45	/	/	/	/	0	0	0	0	0	0	0	0	0		14	13%	81%
44	/	/	/	/	/	0	0	0							8	7%	68%
43	/	/	/	/	/	/	/	0	0	0	0	0	0		14	13%	61%
42	/	/	/	/	/	/	/	/	0	0	0	0			12	11%	48%
41	/	/	/	/	/	0	0								7	6%	37%
40	/	/	/	0	0	0									6	5%	31%
39	/	/	/	/	/	/	/	0	0	0	0				11	10%	25%
38	/	/	0	0	0	0									6	5%	15%
37	/	/													2	2%	10%
36	/	/	0	0											4	4%	8%
35	/	0	0												3	3%	5%
34	0														1	1%	2%
33															0	0%	1%
32															0	0%	1%
31															0	0%	1%
30	0														1	1%	1%
29															0	0%	0%
28															0	0%	0%
27															0	0%	0%
26															0	0%	0%
RECORDER: Nancy Cen											TOTAL NUMBER OF VEHICLES: 110						

85th percentile speed: 46 mph

CITY OF CHULA VISTA - VEHICLE SPEED SURVEY

SEGMENT UNDER STUDY: East H Street (Southwestern College Driveway - Otay Lakes Road)

DATE: 2/26/2019 SURVEY SITE: Mid-block POSTED SPEED: 35

TIME START: 3:12 PM TIME END: 4:13 PM WEATHER: Cloudy

MPH	DIRECTION: <u>EB</u> = 0 <u>WB</u> = \																TOTAL	%	CUM %
	5				10				15				20						
60																	0	0%	100%
59																	0	0%	100%
58																	0	0%	100%
57																	0	0%	100%
56																	0	0%	100%
55																	0	0%	100%
54	0																1	1%	100%
53																	0	0%	99%
52	0																1	1%	99%
51	0																1	1%	98%
50	0	0	/														3	3%	97%
49	0	/															2	2%	94%
48	/																1	1%	93%
47	0	0	0	0	/												5	5%	92%
46	0	0	0	0	0	/	/	/	/	/	/	/	/	/	/	/	10	9%	87%
45	0	0	0	0	/	/	/	/	/	/	/	/	/	/	/	/	14	13%	78%
44	0	0	0	/	/	/											6	6%	64%
43	0	0	0	/	/												5	5%	59%
42	0	0	0	0	0	0	0	/	/	/	/	/	/	/	/	/	15	14%	54%
41	0	0	0	0	/	/	/										7	7%	40%
40	0	0	0	/	/	/	/	/									8	7%	34%
39	0	0	0	0	0	0	0	0	/	/	/						11	10%	26%
38	0	0	0	/	/	/											6	6%	16%
37	0	/															2	2%	10%
36	0	0	0	/	/												5	5%	8%
35	0																1	1%	4%
34																	0	0%	3%
33	0	/	/														3	3%	3%
32																	0	0%	0%
31																	0	0%	0%
30																	0	0%	0%
29																	0	0%	0%
28																	0	0%	0%
27																	0	0%	0%
26																	0	0%	0%
RECORDER: Nancy Cen											TOTAL NUMBER OF VEHICLES: 107								

85th percentile speed: 46 mph