

September 17, 2015

BRIGGS AVENUE BETWEEN FOOTHILL BOULEVARD AND MONTROSE AVENUE ENGINEERING AND TRAFFIC SURVEY

Background

This Engineering and Traffic Survey (E&TS) has been conducted to determine the appropriate speed limit for radar speed enforcement on Briggs Avenue between Foothill Boulevard and Montrose Avenue. Pursuant to California Vehicle Code (CVC) Section 40802(c)(2)(B)(i), one of the criteria for the legal use of radar equipment on County roads is that a current E&TS exists reflecting current conditions of the roadway. This E&TS must be updated every seven years in order to continue the use of radar speed enforcement. This study provides a current engineering analysis of the traffic conditions on Briggs Avenue and evaluates the appropriateness of the existing speed limit.

Limits of the Study

This E&TS was conducted on Briggs Avenue between Foothill Boulevard and Montrose Avenue. The majority of this section of the roadway is under the jurisdiction of the County of Los Angeles. However, a short section at the north end is in the City of La Canada Flintridge.

Existing Conditions

A Type of Facility

Briggs Avenue, between Foothill Boulevard and Montrose Avenue, is classified as a Major Collector on the Functional Classification System Maps on file with the Federal Highway Administration. This segment of Briggs Avenue is classified by the Los Angeles County Highway Plan as a local street.

B Roadway Geometry and Improvements

Briggs Avenue, between Foothill Boulevard and Montrose Avenue, has one travel lane in each direction separated by a dashed yellow centerline, with the exception of a segment between Altura Avenue and Mayfield Avenue where Briggs Avenue has one travel lane in each direction separated by a solid double yellow centerline. Briggs Avenue is improved with curb, gutter and sidewalk along both sides of the roadway between Altura Avenue and Montrose Avenue. Between Foothill Boulevard and Altura Avenue, Briggs Avenue is mixed with areas of discontinuous curb, gutter and sidewalk along both sides of the roadway. There is an uncontrolled school crossing at Mayfield Avenue and Briggs Avenue. The roadway alignment along Briggs Avenue is relatively straight between Foothill Boulevard and Montrose Avenue, with the exception of a reverse curve between Mayfield Avenue and Montrose Avenue. The roadway

profile of Briggs Avenue has a gradual decrease in vertical grades between Foothill Boulevard and Montrose Avenue.

C Fronting Development

Briggs Avenue, between Foothill Boulevard and Montrose Avenue, is fronted by mostly residential developments with some commercial developments and the Interstate 210 (Foothill) Freeway on the west side and by mostly residential developments with institutional (Holy Redeemer School) developments, a semi-public facility (Jehovah's Witnesses) and the Interstate 210 (Foothill) Freeway on the east side.

D Traffic

Machine traffic counts were taken on Briggs Avenue in December 2014. The location and average daily traffic volumes are shown below in vehicles per day.

Location	Volume
South of Prospect Avenue	1,607

E Existing Speed Zone

The posted speed limit on Briggs Avenue, between Foothill Boulevard and Montrose Avenue, is 30 mph. When school children are present within the school zone which is adjacent to the Holy Redeemer School, the speed limit is 25 mph.

F Collision Rate

Collision information was compiled for Briggs Avenue for the two-year period ending December 31, 2013. There was no reported collision on Briggs Avenue for the two-year period ending December 31, 2013. Based on the roadway characteristics, this segment of Briggs Avenue is considered a local street. The mid-block collision rate is shown below in comparison to the Countywide expected rate expressed in collisions per million vehicle miles (See Table B, Mid-Block Average Collision Rates).

Location	Actual C/MVM	Expected C/MVM
Between Foothill Boulevard and Montrose Avenue	0.00	2.61 ± 0.92

G Enforcement Jurisdiction

Enforcement of the CVC for this segment of Briggs Avenue is under the jurisdiction of the Altadena Office of the California Highway Patrol.

H Speed Survey Data

A radar speed check was taken on Briggs Avenue in November 2014. A model Phantom Astro Products radar gun (Serial No. 1619) was used to conduct this speed check and was last calibrated on December 16, 2013. The locations and findings are listed below:

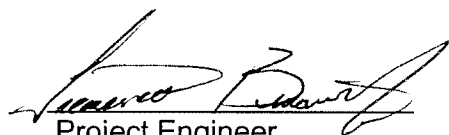
Location	Posted Speed Limit	85 th Percentile Speed	Pace Speed
South of Prospect Avenue	30 mph	42 mph	29-38 mph

Conclusions and Recommendations

**Briggs Avenue
Between Foothill Boulevard and Montrose Avenue**

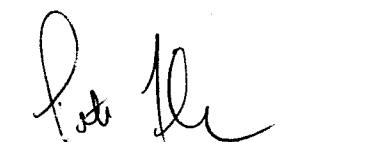
The posted speed limit on Briggs Avenue is 30 mph between Foothill Boulevard and Montrose Avenue. The actual collision rate within the limits of this study is 0.00 C/MVM. Radar speed checks taken in November 2014 revealed an 85th percentile speed of 42 mph. The nearest 5 mph increment of the 85th percentile speed of 42 mph would be rounded down to 40 mph. Taking into consideration an existing uncontrolled school crossing, fronting residential developments, and in accordance with Section 2B.13, 2014 MUTCD, it is recommended that the proposed speed limit on Briggs Avenue, between Foothill Boulevard and Montrose Avenue, be raised to 35 mph from the posted speed limit of 30 mph as shown in the table on the next page.

Summary of Recommendations	Existing	Proposed
Briggs Avenue between Foothill Boulevard and Montrose Avenue	30 mph	35 mph


Project Engineer



9/17/15
Date

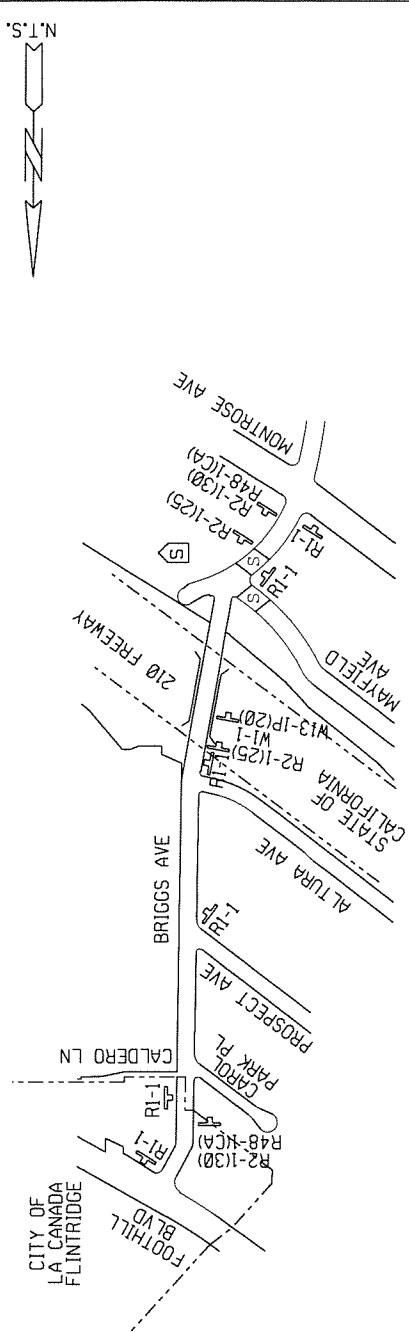

County Radar Coordinator

10/9/15
Date

ENGINEERING AND TRAFFIC SURVEY

STREET BRIGGS AVENUE FROM FOOTHILL BOULEVARD TO MONTROSE AVENUE

FRONTING DEVELOPMENT IMPROVED (SW, C & G)	D8	D1	D12	D1D6	D1
PARKING RESTRICTIONS	FI	NONE	FI	NONE	FULLY IMPROVED
<p>MAP SYMBOLS</p> <p>SCHOOL</p> <p>SIGNAL</p> <p>R1-1 STOP</p> <p>R2-1(SPEED) R2-1 SPEED LIMIT</p> <p>SR4-1(SPEED) SR4-1 SPEED LIMIT</p> <p>CROSSING GUARD & SIGNAL</p> <p>CROSSING GUARD</p> <p>SCHOOL CROSSWALK</p> <p>CROSSWALK</p>					
PARKING RESTRICTIONS	NONE				
IMPROVED(SW, C & G)	C&G NONE C&G NONE FI NONE SW				
FRONTING DEVELOPMENT	D4	D1	D12	D1	D3
NO. LANES, BIKE LANE & MEDIAN	L2				
VERTICAL ALIGNMENT	UPHILL/DOWNHILL				
ROADWAY WIDTH	W66	W68	CURB TO CURB 40'		
DISTANCE	0.53 MI				
AVERAGE DAILY TRAFFIC	1.607				
SPEED CHECK DATA (DATE & LOC.)	11/2014, S/O PROSPECT AVE				
85TH PERCENTILE SPEED	42				
AVERAGE SPEED	35				
10 MILE PACE SPEED	29-38				
COLLISION DATA(2 YRS TO 12/31/13)					
TOTAL MIDBLOCK COLLISIONS	0				
NO. WITH SPEED VIOLATIONS	0				
PREDOMINATE TYPE	NONE				
HBD	0				
COLLISION RATE (C/MVM)	0.00				
COUNTY AVERAGE (C/MVM)	2.61 +/- 0.92				
<p>REMARKS:</p> <p>D1: RESIDENTIAL</p> <p>D2: HIGH DENSITY RESIDENTIAL</p> <p>D3: COMMERCIAL</p> <p>D4: COMMERCIAL</p> <p>D6: INSTITUTIONAL</p> <p>D8: SEMI-PUBLIC</p> <p>FI: FREEWAY</p> <p>FI: FULLY IMPROVED</p> <p>L1: ONE LANE IN EACH DIRECTION SEPARATED BY SOLID DOUBLE YELLOW CENTERLINE</p> <p>L2: ONE LANE IN EACH DIRECTION SEPARATED BY DASHED YELLOW CENTERLINE</p> <p>W66: CURB TO CURB 40'</p> <p>W68: CURB TO CURB 38'</p>					
EXISTING SPEED LIMIT	30				
PROPOSED SPEED LIMIT	35				



***E&TS
Collision Rate***

BRIGGS AVENUE between FOOTHILL BLVD and MONTROSE AVE

Approx. Length (Miles):	<u>0.53</u>
Total # Midblock Collisions:	<u>0</u>
Average Daily Volume:	<u>1,607</u>
Time (Years):	<u>2</u>

$$\text{Collision Rate} = \frac{\# \text{ midblock Collisions} \times 10^6}{\text{Vol} \times \text{Time (years)} \times 365 \times \text{Length (miles)}}$$

$$\text{Collision Rate} = \frac{0 \times 10^6}{1,607 \times 2 \times 365 \times 0.53}$$

Collision Rate = 0.00 C/MVM

Spot Speed Study

Prepared by: National Data & Surveying Services

County of Los Angeles

DATE: 11/25/2014

Location: Briggs Ave S/O Prospect Ave

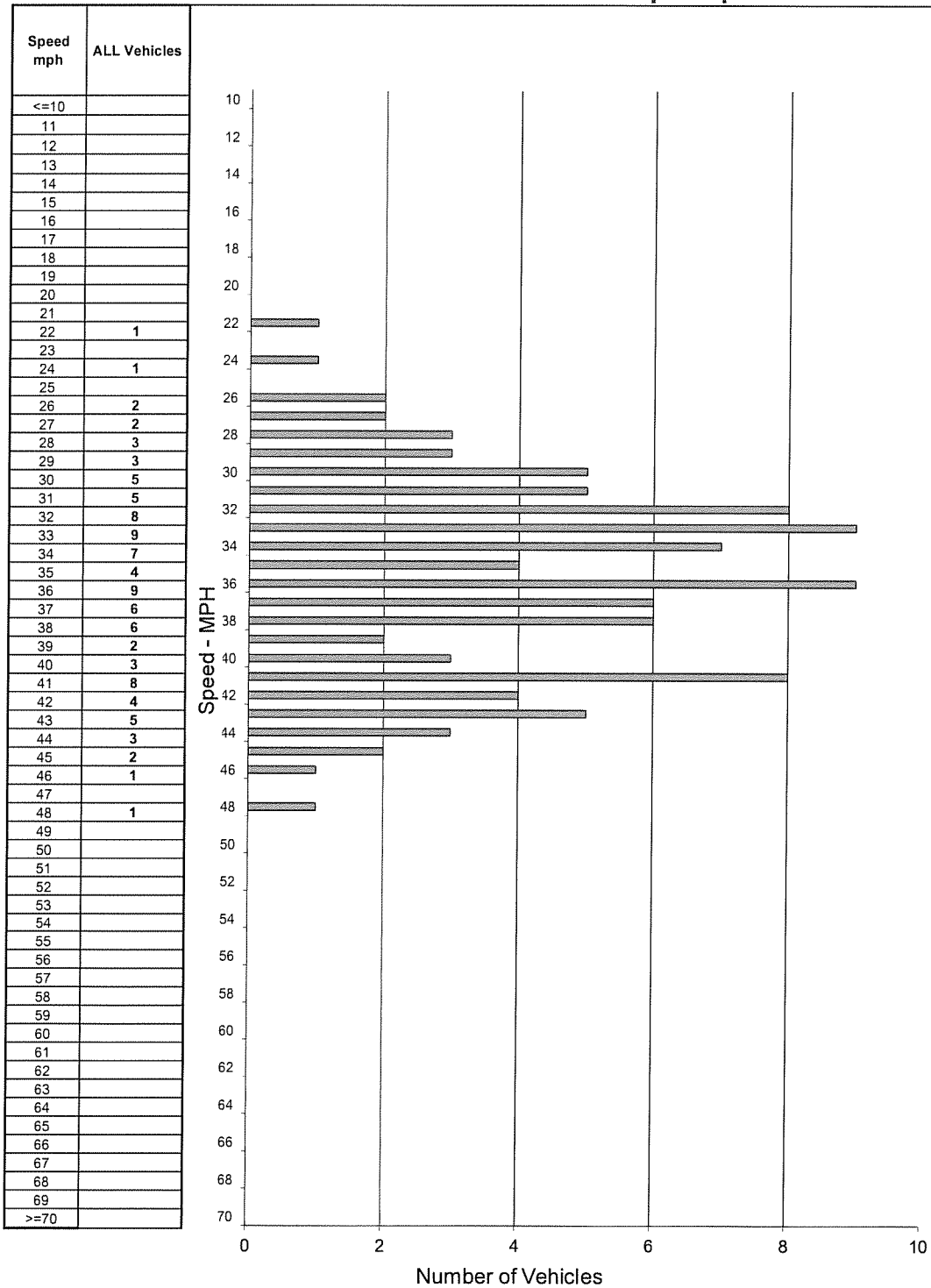
DAY: Tuesday

Posted Speed: 30 MPH

Project #: 14-5774-017

SERIAL #: 1619

Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	100	22 - 48	35 mph	42 mph	29 - 38	62	62%	9% / 9	29% / 29

Prepared by NDS/ATD

VOLUME
Briggs Ave S/O Prospect Ave

Day: Thursday
Date: 12/4/2014

County: Los Angeles
Project #: CA14_5775_017

DAILY TOTALS					NB	SB	EB	WB	Total
					693	914	0	0	1,607

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	0	0			0	12:00	12	9			21
00:15	0	1			1	12:15	17	8			25
00:30	0	1			1	12:30	8	17			25
00:45	0	0	2		0 2	12:45	7	44	12	46	19 90
01:00	1	0			1	13:00	8	14			22
01:15	0	1			1	13:15	14	7			21
01:30	0	0			0	13:30	12	11			23
01:45	0	1	0	1	0 2	13:45	8	42	15	47	23 89
02:00	0	0			0	14:00	10	16			26
02:15	0	0			0	14:15	17	15			32
02:30	0	0			0	14:30	16	15			31
02:45	0	0			0	14:45	19	62	28	74	47 136
03:00	0	1			1	15:00	17	21			38
03:15	0	0			0	15:15	10	16			26
03:30	0	0			0	15:30	11	16			27
03:45	0	0	1		0 1	15:45	10	48	17	70	27 118
04:00	0	0			0	16:00	14	9			23
04:15	0	0			0	16:15	21	15			36
04:30	0	1			1	16:30	15	12			27
04:45	2	2	2	3	4 5	16:45	18	68	18	54	36 122
05:00	3	1			4	17:00	10	20			30
05:15	1	1			2	17:15	20	13			33
05:30	0	1			1	17:30	19	20			39
05:45	3	7	1	4	4 11	17:45	8	57	8	61	16 118
06:00	1	1			2	18:00	17	11			28
06:15	1	2			3	18:15	23	16			39
06:30	1	6			7	18:30	10	15			25
06:45	2	5	7	16	9 21	18:45	8	58	15	57	23 115
07:00	7	7			14	19:00	6	9			15
07:15	3	12			15	19:15	11	13			24
07:30	0	32			32	19:30	7	12			19
07:45	2	12	54	105	56 117	19:45	7	31	16	50	23 81
08:00	7	34			41	20:00	6	14			20
08:15	14	18			32	20:15	7	5			12
08:30	13	23			36	20:30	6	5			11
08:45	22	56	29	104	51 160	20:45	3	22	3	27	6 49
09:00	8	18			26	21:00	7	8			15
09:15	6	17			23	21:15	11	6			17
09:30	10	8			18	21:30	5	6			11
09:45	10	34	13	56	23 90	21:45	3	26	2	22	5 48
10:00	10	12			22	22:00	8	7			15
10:15	16	15			31	22:15	5	2			7
10:30	12	14			26	22:30	1	1			2
10:45	11	49	16	57	27 106	22:45	2	16	0	10	2 26
11:00	13	11			24	23:00	1	1			2
11:15	12	8			20	23:15	0	1			1
11:30	18	11			29	23:30	1	1			2
11:45	8	51	14	44	22 95	23:45	0	2	0	3	0 5
TOTALS	217	393			610	TOTALS	476	521			997
SPLIT %	35.6%	64.4%			38.0%	SPLIT %	47.7%	52.3%			62.0%

DAILY TOTALS					NB	SB	EB	WB	Total
					693	914	0	0	1,607

AM Peak Hour	08:15	07:30			07:45	PM Peak Hour	14:15	14:45	14:15
AM Pk Volume	57	138			165	PM Pk Volume	69	81	148
Pk Hr Factor	0.648	0.639			0.737	Pk Hr Factor	0.908	0.723	0.787
7 - 9 Volume	68	209			277	4 - 6 Volume	125	115	240
7 - 9 Peak Hour	08:00	07:30			07:45	4 - 6 Peak Hour	16:00	16:45	16:45
7 - 9 Pk Volume	56	138			165	4 - 6 Pk Volume	68	71	138
Pk Hr Factor	0.636	0.639			0.737	Pk Hr Factor	0.810	0.888	0.885

Prepared by NDS/ATD

Project #: CA14_5775_017

County: Los Angeles

Location: Briggs Ave S/O Prospect Ave

Date: 12/4/2014

