Traffic Analysis

Proposed Grangeville Avenue / BNSF Railroad Grade Separation

Hanford, California

Prepared For:

TRC Companies, Inc.
10680 White Rock Road, Suite 100
Rancho Cordova, California 95670

Date:

April 30, 2019

Job No.:

18-066.01

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Mr. Mark Imbriani
TRC Companies, Inc.
10680 White Rock Road, Suite 100
Rancho Cordova, California 95670

April 30, 2019

Subject: Traffic Analysis
Proposed Grangeville Avenue / BNSF Railroad Grade Separation
Hanford, California

Dear Mr. Imbriani:

INTRODUCTION

This report presents the results of traffic counts and analyses related to construction of the Grangeville Avenue / BNSF Railroad grade separation in Hanford, California. This limited analysis focuses on the traffic volumes that will be diverted by the project and the anticipated conditions after completion of the project.

PROJECT DESCRIPTION

The proposed Grangeville Avenue / BNSF Railroad Grade Separation will be an underpass below the railroad tracks that will likely affect at least 850 feet in each direction along Grangeville Avenue.

Grangeville Boulevard is an arterial street that will be closed during construction, likely between University Avenue and Rodgers Road. It is anticipated that the intersection of Rodgers Road and Grangeville Boulevard will require full closure during at least a portion of the construction schedule. The following locations will be closed during construction and the connections will likely be permanently eliminated:

- Mildred Street at Grangeville Boulevard;
- Santa Fe Mini Storage Driveway;
- Tara Mobile Estates Driveway.

The project may include improvements on Claridge Lane to provide access to the existing mini storage facility and a new driveway on Malone Street to provide access to the mobile estates.

A vicinity map is presented in the attached Figure 1, Site Vicinity Map.

EXISTING TRAFFIC VOLUMES

Intersection turning movement traffic counts were performed on a weekday between 7:00 and 9:00 a.m. and between 4:00 and 6:00 p.m. at the following intersections:

- University Avenue / Grangeville Avenue

- Tara Mobile Homes / Grangeville Avenue
- Mildred Street / Santa Fe Central & Mini Storage / Grangeville Avenue
- Rodgers Road / Grangeville Avenue

The intersection counts included bicycles, pedestrians, and heavy vehicles. The traffic count data sheets are attached and include the dates the counts were performed. The existing peak-hour turning movement volumes are presented in Figure 2, Existing Peak Hour Traffic Volumes.

A 24-hour vehicle classification count was performed on Grangeville Avenue near the BNSF crossing on Tuesday, December 18, 2018. The count revealed a total 24-hour traffic volume (eastbound and westbound combined) of 14,166 vehicles with a peak-hour volume of 1,336 vehicles between 4:30 and 5:30 p.m. Approximately five percent of the vehicles are trucks (heavy vehicles) of two or more axles.

LANE CONFIGURATIONS AND INTERSECTION CONTROL

The existing lane configurations and intersection control at the study intersections are illustrated in Figure 3, Existing Lane Configurations.

TRAFFIC VOLUMES AT ALTERNATE CROSSINGS

The nearest alternate locations to cross the BNSF railroad exist on Fargo Avenue to the north and Elm Street to the south. 11th Avenue also provides an alternative north-south crossing south of Elm Street, and Lacey Boulevard is the next major east-west street to the south. It is assumed that the detour established for the closure will include 12th Avenue, Fargo Avenue, and 11th Avenue. Traffic is also likely to redistribute to Greenfield Avenue and Elm Street to cross the tracks, or to 11th Avenue south of Elm Street. The following is a description of the alternate crossings:

Fargo Avenue at the BNSF Railroad is a two-lane at-grade crossing (one lane in each direction) with active traffic control devices, post-mounted and cantilevered flashing lights, signage, pavement markings, raised medians, and two automatic gates on each approach. The crossing is approximately one mile north of Grangeville Avenue. Fargo Avenue is designated as an arterial street in the City of Hanford General Plan with a current traffic volume on the order of 10,500 vehicles per day (both directions combined) based on traffic count data provided by the City of Hanford.

Elm Street at the BNSF Railroad is a four-lane at-grade crossing (two lanes in each direction) with active traffic control devices, post-mounted and cantilevered flashing lights, signage, pavement markings, and one automatic gate on each approach. There are no raised medians at the crossing. The crossing is approximately 0.7 mile south of Grangeville Avenue. Elm Street is a local road with an existing traffic volume on the order of 6,800 vehicles per day (both directions combined) based on traffic count data provided by the City of Hanford. The stop-controlled intersection of Elm Street and Greenfield Avenue is located approximately 350 feet west of the at-grade crossing. The signalized intersection of Elm Street and 11th Avenue is located less than 300 feet east of the at-grade crossing.

Lacey Boulevard at the BNSF Railroad is a four-lane at-grade crossing (two lanes in each direction) with active traffic control devices, post-mounted flashing lights, signage, pavement markings, raised medians, and two automatic gates on each approach. The crossing is approximately one mile south and half a mile east of the Grangeville Avenue crossing. Lacey Boulevard is designated as a collector street east of 11th Avenue in the City of Hanford General Plan with a current traffic volume on the order of 11,400 vehicles per day (both directions combined) based on traffic count data provided by the City of Hanford.

ROAD SEGMENT ANALYSES

The Transportation Research Board *Highway Capacity Manual,* 2000, (HCM) defines level of service (LOS) as a qualitative measure describing operational characteristics within a traffic stream, based on service measures such as speed and travel time, freedom to maneuver, traffic interruptions, comfort, and convenience. Level-of-service characteristics for road segments are presented in Table 1.

Table 1
Level of Service Characteristics for Roadways

Level of Service	Description
A	Primarily free flow operations
B	Reasonably unimpeded operations, ability to maneuver only slightly restricted
C	Stable operations, ability to maneuver and select operating speed affected
D	Unstable flow, speeds and ability to maneuver restricted
E	Significant delays, flow quite unstable
F	Extremely slow speeds

Reference: 1998 *Highway Capacity Manual*, Transportation Research Board

For general planning purposes, road segment levels of service were determined based on procedures outlined in the HCM2010 utilizing the 2012 Florida Department of Transportation (FDOT) Quality/Level of Service Handbook Tables (Florida tables). The Florida tables present generalized correlations between traffic volumes and LOS based on the nationally-utilized and accepted HCM2010; the Florida tables are frequently utilized throughout California for road segment analyses. The Florida tables present LOS criteria based on the type of roadway being analyzed and the regional setting (i.e., urban areas or transitioning areas). The applicable Florida table is attached.

It should be noted that the actual operations of the roadways will likely be governed by the operations at intersections near the crossings. The analyses presented herein should be utilized only for the discussion of the order of magnitude of the effects of the Grangeville Avenue closure.

Table 2 presents the specific volume thresholds used in the analyses. It should be noted that reference to "signalized" roadways in the Florida tables includes stop-controlled intersections.

Table 2
Volume Thresholds for Non-State Signalized Roadway Levels of Service

Lanes	Configuration	A	B	C	D	E/F
2	Divided, ≥40 MPH (Fargo Avenue)	*	*	≤15,876	15,877 – 16,726	>16,726
4	Undivided, ≤35 MPH (Elm Street)	*	*	≤9,787	9,788 – 21,870	>21,870
4	Divided, ≤35 MPH (Lacey Boulevard)	*	*	≤13,050	13,050 – 30,420	>30,420

Reference: Florida Department of Transportation Table 1, Generalized Annual Average Daily Volumes for Florida's Urbanized Areas (utilizing Non-State Signalized Roadway Adjustments) dated December 18, 2012

Table 3 presents the results of the road segment analyses. The analyses are based on an assumption that 50 percent of the existing trips on Grangeville Avenue will redistribute to Fargo Avenue, 25 percent will use Elm Street, and 25 percent will use Lacey Boulevard.

Table 3
Summary of Estimated LOS

Road Segment	Existing Volume	Existing LOS	Detour Volume	Detour LOS
Fargo Avenue	10,500	C or better	17,583	E/F
Elm Street	6,800	C or better	10,342	D
Lacey Boulevard	11,400	C or better	14,942	D

DISCUSSION OF ANALYSES

The results of the road segment analyses suggest that congestion and delays are likely on Fargo Avenue and on Elm Street during construction. The conditions on Elm Street are expected to be worse than suggested by the road segment analyses because of the short length of the road segment and the proximity of intersections to the crossing. Congested conditions at intersections along the detour route should be anticipated.

A public information campaign is recommended to alert motorists of the project, the alternate routes, and the potential for congestion. It is recommended that alternate routes farther from the project site, such as State Route 198 and Flint Avenue, be suggested as alternate routes.

CONCLUSIONS

Standard traffic engineering principles and methods were employed to study the existing conditions and to estimate conditions that may occur during construction.

The conclusion of this study is that the nearest potential detour routes available during construction of the Grangeville Avenue / BNSF grade separation are likely to experience severe congestion and delays during construction.

A public information campaign is recommended to alert motorists of the project, the alternate routes, and the potential for congestion. It is recommended that alternate routes farther from the project site, such as State Route 198 and Flint Avenue, be suggested as alternate routes.

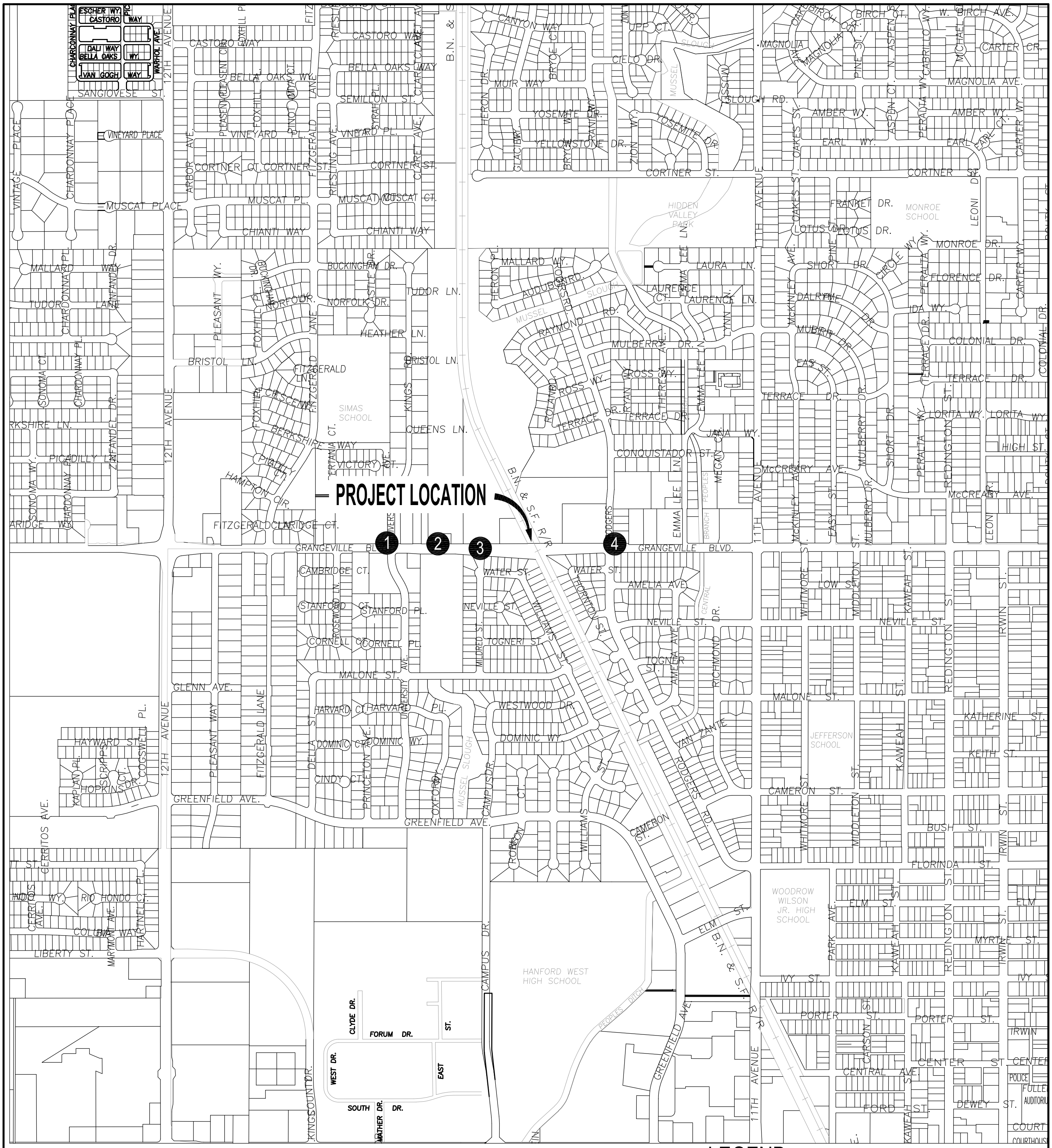
Thank you for the opportunity to perform this traffic analysis. Please feel free to call our office if you have any questions.

PETERS ENGINEERING GROUP

John Rowland, PE, TE

Attachments: Figures 1 through 3
Traffic Count Data Sheets
Florida Table

FIGURES



Proposed Grangeville Avenue / BNSF Railroad Grade Separation
Hanford, California

LEGEND

- X STUDY AREA INTERSECTIONS
- PROJECT SITE

SITE VICINITY MAP

Not to Scale

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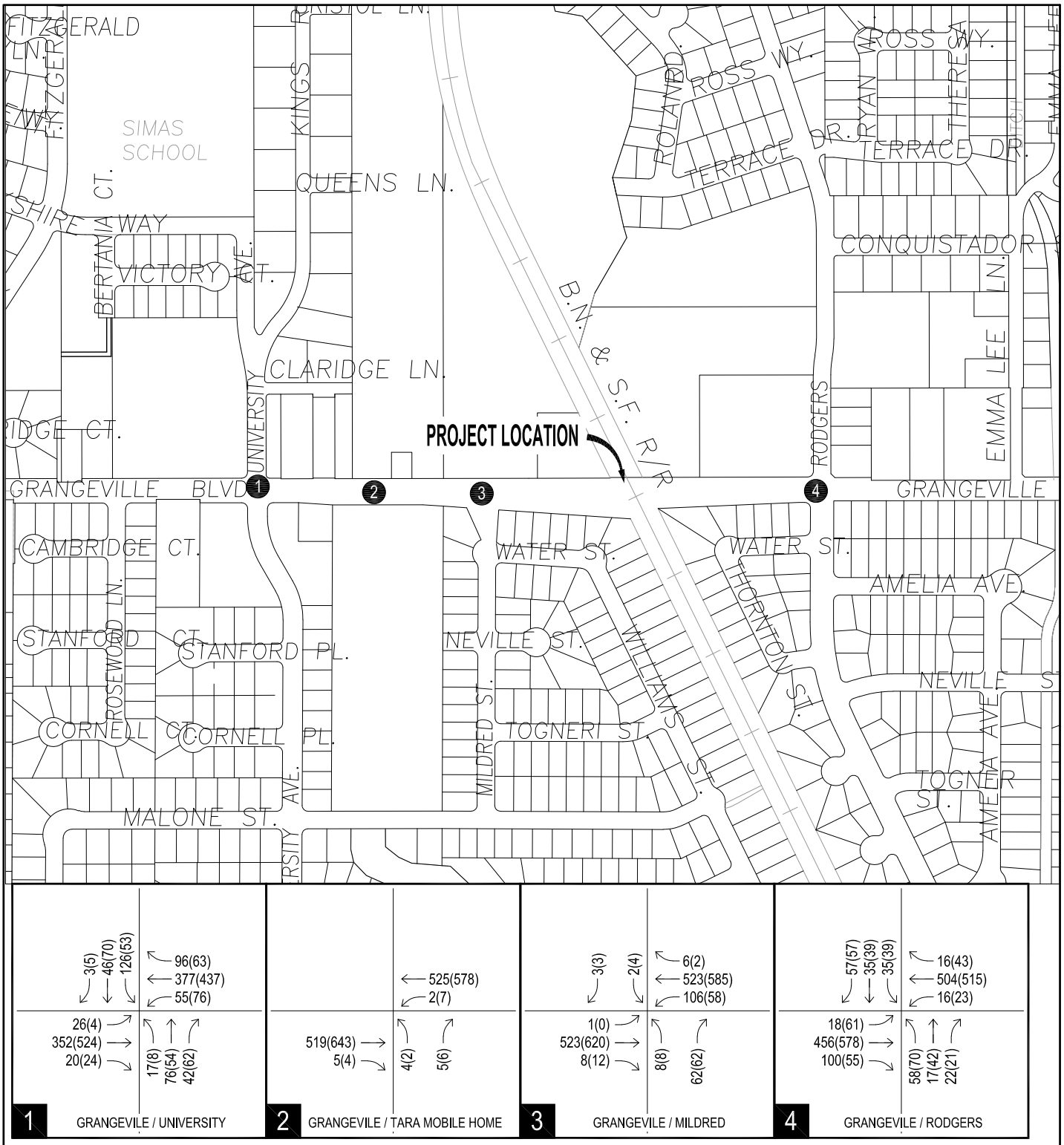
Figure 1



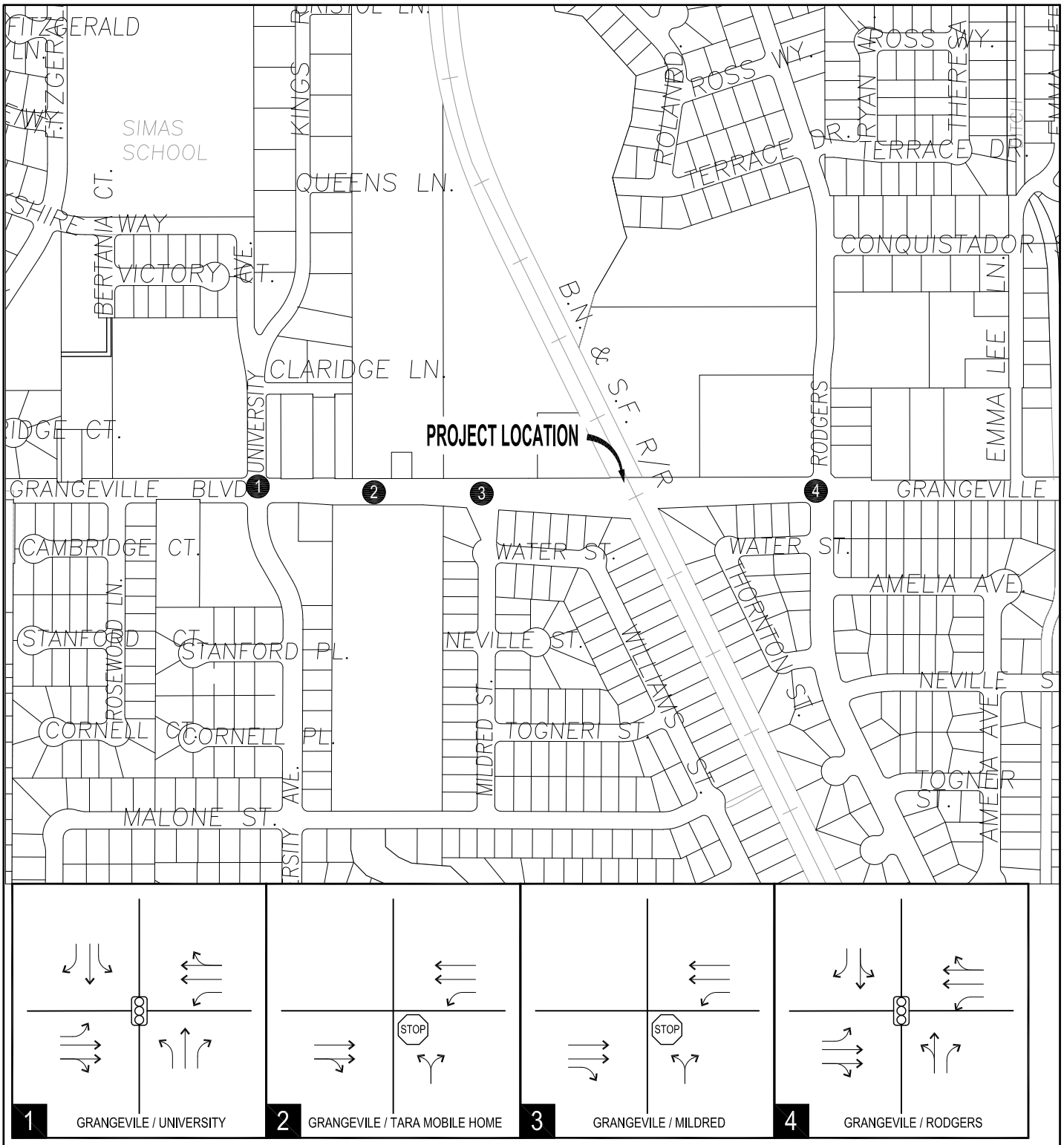
Proposed Grangeville Avenue / BNSF Railroad Grade Separation
Hanford, California

LEGEND

(X)	STUDY AREA INTERSECTIONS
XX (YY)	AM (PM) PEAK HOUR VOLUMES
	PROJECT SITE

EXISTING PEAK HOUR TRAFFIC VOLUMES

Not to Scale



Proposed Grangeville Avenue / BNSF Railroad Grade Separation
Hanford, California

LEGEND

- XX STUDY AREA INTERSECTIONS
- PROJECT SITE
- SIGNALIZED INTERSECTION
- STOP STOP SIGN
- DIRECTION OF TRAVEL

EXISTING LANE CONFIGURATIONS AND STOP CONTROL

Not to Scale

TRAFFIC COUNT DATA SHEETS

Metro Traffic Data Inc.
310 N. Irwin Street - Suite 20
Hanford, CA 93230

800-975-6938 Phone/Fax
www.metrotrafficdata.com

Turning Movement Report

Prepared For:

Peters Engineering Group
952 Pollasky Avenue
Clovis, CA 93612

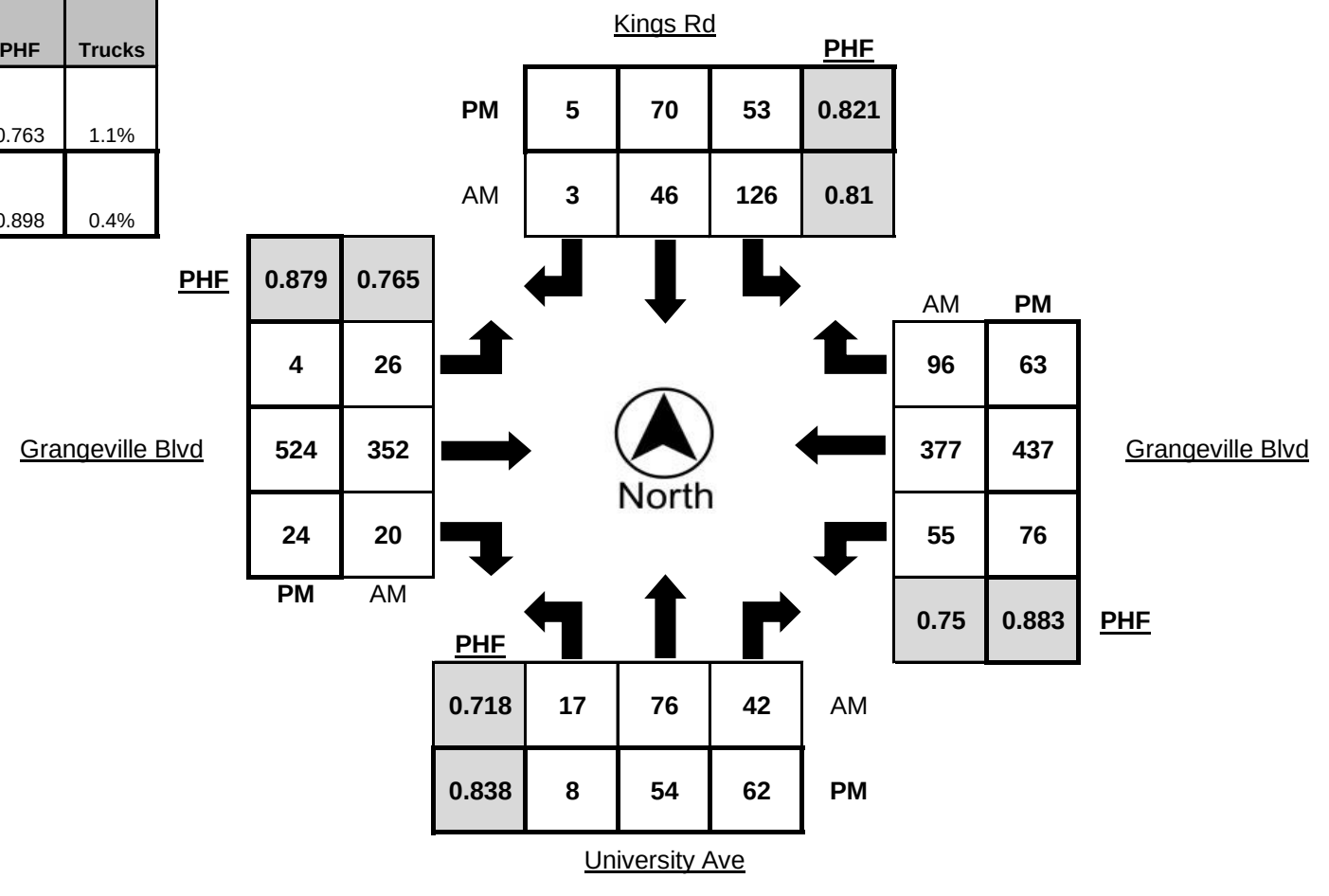
LOCATION Grangeville Blvd @ University Ave
LATITUDE 36.3426
COUNTY Kings
LONGITUDE -119.6661
COLLECTION DATE Tuesday, December 18, 2018
WEATHER AM Fog / PM Clear

	Northbound				Southbound				Eastbound				Westbound			
Time	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
7:00 AM - 7:15 AM	0	7	3	1	10	12	0	1	1	34	2	0	4	50	6	4
7:15 AM - 7:30 AM	3	11	9	0	25	6	0	1	4	59	4	0	10	63	11	4
7:30 AM - 7:45 AM	7	26	14	0	38	13	2	1	11	100	5	0	12	88	27	0
7:45 AM - 8:00 AM	3	32	10	1	42	11	1	0	10	113	7	1	18	110	48	0
8:00 AM - 8:15 AM	4	7	9	0	21	16	0	0	1	80	4	1	15	116	10	4
8:15 AM - 8:30 AM	1	2	6	1	13	14	2	0	1	78	5	0	3	57	11	2
8:30 AM - 8:45 AM	2	3	3	0	7	17	1	0	0	67	3	1	11	55	7	1
8:45 AM - 9:00 AM	3	5	3	0	9	11	0	0	0	64	2	2	10	73	6	4
TOTAL	**23**	**93**	**57**	**3**	**165**	**100**	**6**	**3**	**28**	**595**	**32**	**5**	**83**	**612**	**126**	**19**

	Northbound				Southbound				Eastbound				Westbound			
Time	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
4:00 PM - 4:15 PM	3	12	8	0	12	13	2	0	1	105	1	0	11	110	5	2
4:15 PM - 4:30 PM	3	6	6	0	18	10	1	0	0	125	7	1	8	104	12	1
4:30 PM - 4:45 PM	2	13	22	0	13	17	1	0	1	119	4	2	14	103	9	0
4:45 PM - 5:00 PM	2	11	12	0	14	12	2	0	3	105	8	0	18	93	15	1
5:00 PM - 5:15 PM	1	16	19	0	12	17	1	0	0	148	7	0	27	114	22	0
5:15 PM - 5:30 PM	3	14	9	0	14	24	1	0	0	152	5	0	17	127	17	2
5:30 PM - 5:45 PM	1	17	10	0	7	8	2	0	2	107	5	0	12	110	12	0
5:45 PM - 6:00 PM	1	11	8	0	14	7	1	0	0	111	3	0	4	84	17	0
TOTAL	**16**	**100**	**94**	**0**	**104**	**108**	**11**	**0**	**7**	**972**	**40**	**3**	**111**	**845**	**109**	**6**

	Northbound				Southbound				Eastbound				Westbound			
PEAK HOUR	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
7:15 AM - 8:15 AM	17	76	42	1	126	46	3	2	26	352	20	2	55	377	96	8
4:30 PM - 5:30 PM	8	54	62	0	53	70	5	0	4	524	24	2	76	437	63	3

	PHF	Trucks
AM	0.763	1.1%
PM	0.898	0.4%



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Turning Movement Report

Prepared For:

Peters Engineering Group
952 Pollasky Avenue
Clovis, CA 93612

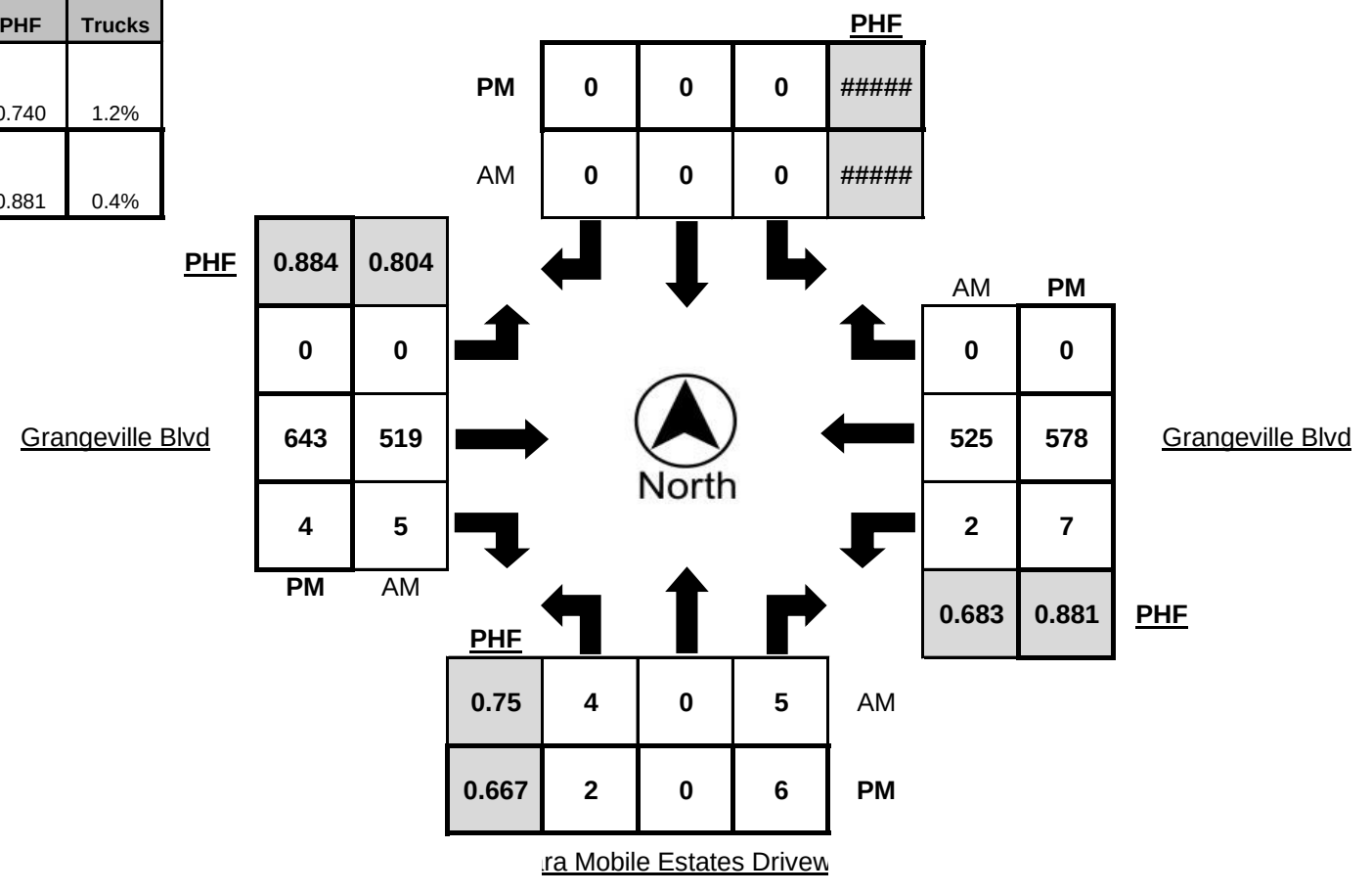
LOCATION Grangeville Blvd @ Tara Mobile Estates Driveway
LATITUDE 36.3426
COUNTY Kings
LONGITUDE -119.6649
COLLECTION DATE Tuesday, December 18, 2018
WEATHER AM Fog / PM Clear

	Northbound				Southbound				Eastbound				Westbound			
Time	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
7:00 AM - 7:15 AM	1	0	1	0	0	0	0	0	0	45	0	2	0	56	0	3
7:15 AM - 7:30 AM	1	0	2	0	0	0	0	0	0	95	0	1	0	88	0	4
7:30 AM - 7:45 AM	2	0	0	0	0	0	0	0	0	150	2	1	0	121	0	0
7:45 AM - 8:00 AM	0	0	2	0	0	0	0	0	0	160	3	2	1	192	0	2
8:00 AM - 8:15 AM	1	0	1	0	0	0	0	0	0	114	0	1	1	124	0	2
8:15 AM - 8:30 AM	1	0	0	0	0	0	0	0	0	92	0	1	1	69	0	2
8:30 AM - 8:45 AM	1	0	1	0	0	0	0	0	0	78	2	1	0	77	0	1
8:45 AM - 9:00 AM	6	0	0	0	0	0	0	0	0	74	0	1	0	83	0	4
TOTAL	**13**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**808**	**7**	**10**	**3**	**810**	**0**	**18**

	Northbound				Southbound				Eastbound				Westbound			
Time	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
4:00 PM - 4:15 PM	0	0	2	0	0	0	0	0	0	121	1	0	3	125	0	2
4:15 PM - 4:30 PM	0	0	2	0	0	0	0	0	0	147	1	1	1	124	0	1
4:30 PM - 4:45 PM	1	0	0	0	0	0	0	0	0	157	2	0	2	126	0	1
4:45 PM - 5:00 PM	0	0	2	1	0	0	0	0	0	129	1	0	1	126	0	2
5:00 PM - 5:15 PM	1	0	2	0	0	0	0	0	0	183	0	0	2	164	0	0
5:15 PM - 5:30 PM	0	0	2	0	0	0	0	0	0	174	1	0	2	162	0	1
5:30 PM - 5:45 PM	2	0	0	0	0	0	0	0	0	118	0	0	6	131	0	0
5:45 PM - 6:00 PM	0	0	1	0	0	0	0	0	0	135	2	0	1	103	0	1
TOTAL	**4**	**0**	**11**	**1**	**0**	**0**	**0**	**0**	**0**	**1164**	**8**	**1**	**18**	**1061**	**0**	**8**

	Northbound				Southbound				Eastbound				Westbound			
PEAK HOUR	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
7:15 AM - 8:15 AM	4	0	5	0	0	0	0	0	0	519	5	5	2	525	0	8
4:30 PM - 5:30 PM	2	0	6	1	0	0	0	0	0	643	4	0	7	578	0	4

	PHF	Trucks
AM	0.740	1.2%
PM	0.881	0.4%



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Turning Movement Report

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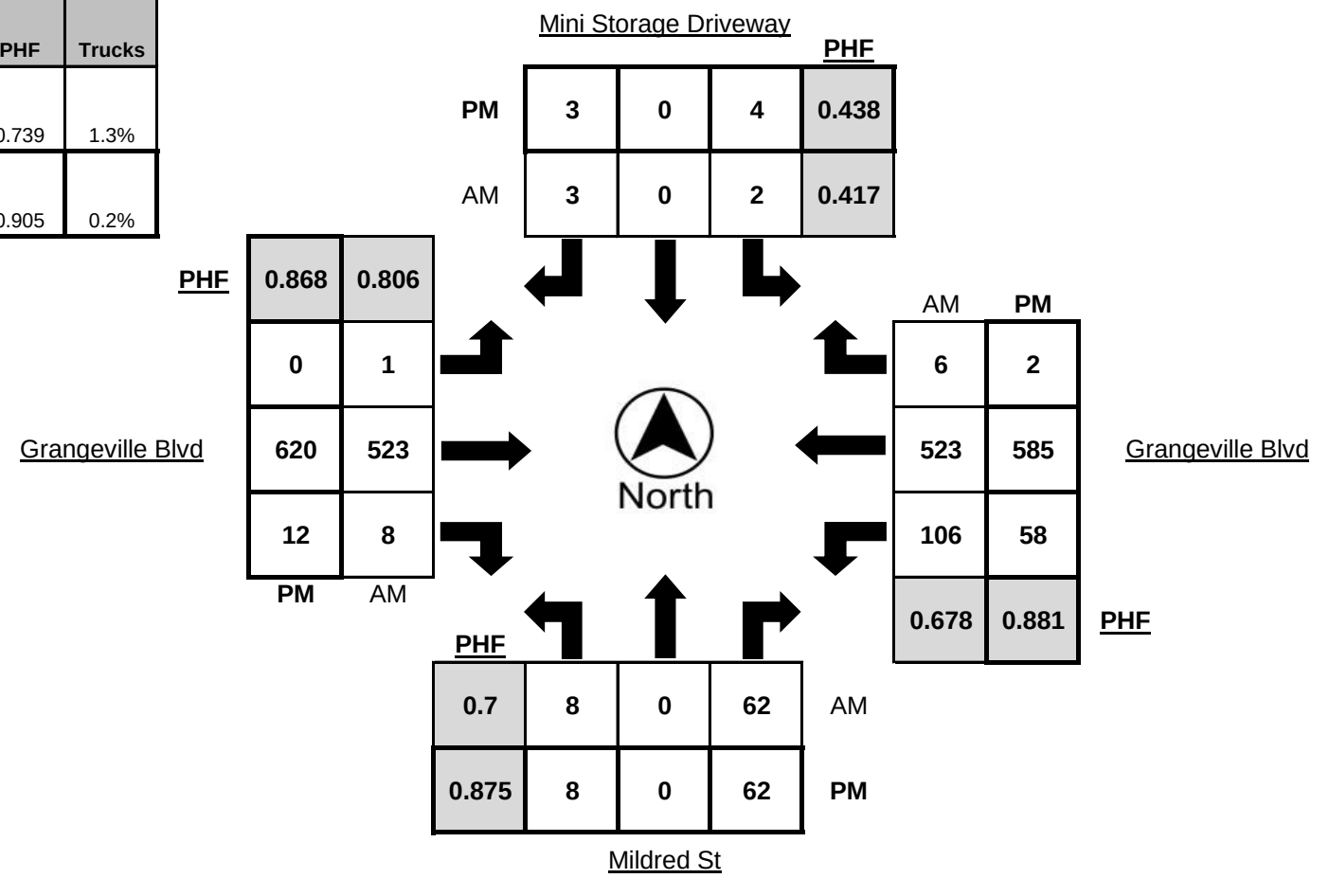
LOCATION Grangeville Blvd @ Mildred St
LATITUDE 36.3426
COUNTY Kings
LONGITUDE -119.6636
COLLECTION DATE Tuesday, December 18, 2018
WEATHER AM Fog / PM Clear

	Northbound				Southbound				Eastbound				Westbound			
Time	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
7:00 AM - 7:15 AM	2	0	10	1	0	0	1	0	0	48	1	2	3	56	3	4
7:15 AM - 7:30 AM	2	0	17	1	0	0	1	0	0	95	0	1	11	83	1	4
7:30 AM - 7:45 AM	1	0	24	1	0	0	1	0	0	148	3	1	41	131	1	0
7:45 AM - 8:00 AM	4	0	17	0	0	0	0	0	0	162	3	2	36	197	1	3
8:00 AM - 8:15 AM	1	0	4	0	2	0	1	1	1	118	2	1	18	112	3	1
8:15 AM - 8:30 AM	2	0	8	0	1	0	0	0	0	94	1	1	9	68	1	3
8:30 AM - 8:45 AM	0	0	6	0	1	0	0	0	1	78	1	1	5	76	0	1
8:45 AM - 9:00 AM	2	0	4	0	0	0	0	0	0	71	2	1	3	85	3	4
TOTAL	**14**	**0**	**90**	**3**	**4**	**0**	**4**	**1**	**2**	**814**	**13**	**10**	**126**	**808**	**13**	**20**

	Northbound				Southbound				Eastbound				Westbound			
Time	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
4:00 PM - 4:15 PM	2	0	12	0	2	0	1	0	0	120	3	0	12	124	3	2
4:15 PM - 4:30 PM	2	0	11	0	1	0	0	0	0	144	2	0	10	122	0	1
4:30 PM - 4:45 PM	2	0	16	0	1	0	1	0	0	150	1	0	16	127	1	1
4:45 PM - 5:00 PM	2	0	13	0	0	0	0	0	0	124	3	0	13	136	1	1
5:00 PM - 5:15 PM	2	0	18	0	3	0	1	0	0	180	2	0	12	156	0	1
5:15 PM - 5:30 PM	2	0	15	0	0	0	1	0	0	166	6	0	17	166	0	0
5:30 PM - 5:45 PM	2	0	10	0	0	0	0	0	0	123	1	0	13	137	0	0
5:45 PM - 6:00 PM	1	0	11	0	1	0	0	0	2	132	2	0	10	104	0	1
TOTAL	**15**	**0**	**106**	**0**	**8**	**0**	**4**	**0**	**2**	**1139**	**20**	**0**	**103**	**1072**	**5**	**7**

	Northbound				Southbound				Eastbound				Westbound			
PEAK HOUR	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
7:15 AM - 8:15 AM	8	0	62	2	2	0	3	1	1	523	8	5	106	523	6	8
4:30 PM - 5:30 PM	8	0	62	0	4	0	3	0	0	620	12	0	58	585	2	3

	PHF	Trucks
AM	0.739	1.3%
PM	0.905	0.2%



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Turning Movement Report

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952 Pollasky Avenue
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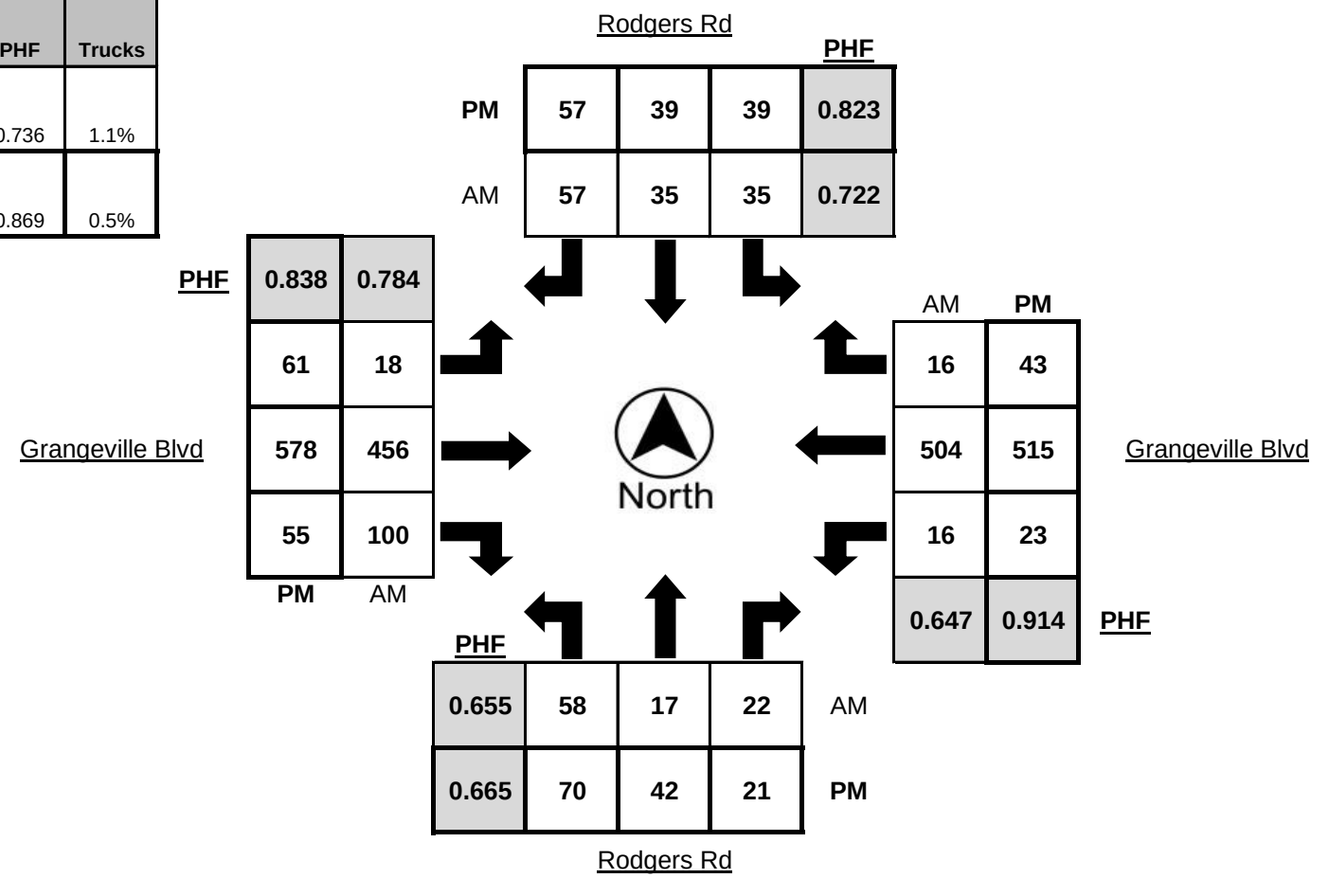
LOCATION Grangeville Blvd @ Rodgers Rd
LATITUDE 36.3427
COUNTY Kings
LONGITUDE -119.6596
COLLECTION DATE Tuesday, December 18, 2018
WEATHER AM Fog / PM Clear

	Northbound				Southbound				Eastbound				Westbound			
Time	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
7:00 AM - 7:15 AM	3	0	4	1	6	8	7	1	2	48	5	2	3	49	3	3
7:15 AM - 7:30 AM	8	2	4	0	7	7	16	0	1	97	13	1	2	72	4	4
7:30 AM - 7:45 AM	15	5	4	0	13	14	17	0	5	135	28	2	3	130	2	0
7:45 AM - 8:00 AM	23	3	11	2	7	8	11	0	4	142	37	2	6	196	5	3
8:00 AM - 8:15 AM	12	7	3	0	8	6	13	0	8	82	22	0	5	106	5	1
8:15 AM - 8:30 AM	9	1	3	0	6	3	6	0	5	90	12	1	0	58	5	3
8:30 AM - 8:45 AM	8	1	2	0	4	8	3	0	4	73	7	1	1	70	2	1
8:45 AM - 9:00 AM	8	5	2	0	4	9	7	0	5	65	6	2	1	76	2	4
TOTAL	**86**	**24**	**33**	**3**	**55**	**63**	**80**	**1**	**34**	**732**	**130**	**11**	**21**	**757**	**28**	**19**

	Northbound				Southbound				Eastbound				Westbound			
Time	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
4:00 PM - 4:15 PM	9	9	5	0	5	9	8	0	8	116	13	0	2	126	9	2
4:15 PM - 4:30 PM	11	6	6	0	5	8	5	1	10	128	14	1	5	118	4	1
4:30 PM - 4:45 PM	13	7	4	1	11	16	14	1	10	132	16	1	4	120	10	0
4:45 PM - 5:00 PM	11	13	0	0	5	7	12	0	20	119	12	1	5	124	8	1
5:00 PM - 5:15 PM	27	12	11	0	12	11	13	0	19	176	12	0	10	129	12	2
5:15 PM - 5:30 PM	19	10	6	0	11	5	18	0	12	151	15	0	4	142	13	0
5:30 PM - 5:45 PM	17	9	5	0	4	6	7	0	17	107	5	0	5	120	12	0
5:45 PM - 6:00 PM	17	10	4	0	7	8	9	0	12	118	8	0	5	90	5	0
TOTAL	**124**	**76**	**41**	**1**	**60**	**70**	**86**	**2**	**108**	**1047**	**95**	**3**	**40**	**969**	**73**	**6**

	Northbound				Southbound				Eastbound				Westbound			
PEAK HOUR	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
7:15 AM - 8:15 AM	58	17	22	2	35	35	57	0	18	456	100	5	16	504	16	8
4:30 PM - 5:30 PM	70	42	21	1	39	39	57	1	61	578	55	2	23	515	43	3

	PHF	Trucks
AM	0.736	1.1%
PM	0.869	0.5%



Metro Traffic Data Inc.

Prepared For:

Peters Engineering Group
952 Pollasky Avenue
Clovis, CA 93612

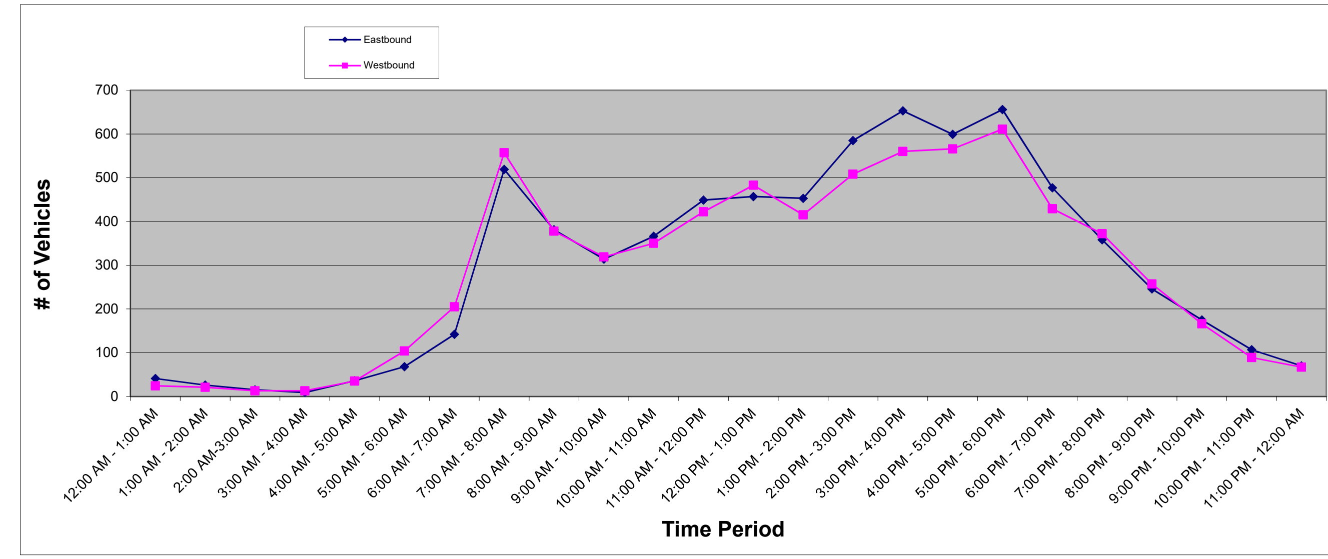
Metro Traffic Data Inc.
310 N. Irwin Street - Suite 20
Hanford, CA 93230

800-975-6938 Phone/Fax
www.metrotraffic data.com

Description	Grangeville Blvd @ BNSF Railroad
Survey Date	Tuesday, December 18, 2018
Latitude	36.342575
Longitude	-119.6609998
Number of Lanes	4
Total Volume	14166
HV Percentage	5.2%
AM Peak Period	7:15am-8:15am
AM Peak Volume	1206
AM PHF	0.73
PM Peak Period	4:30pm-5:30pm
PM Peak Volume	1336
PM PHF	0.90

Class 1 - Motorcycles, 2 axles
Class 2 - Passenger cars, 2 axles
Class 3 - Pickup trucks, vans, 2 axles
Class 4 - Busses
Class 5 - Single unit, 2 axle, 6 tires
Class 6 - Single unit truck, 3 axles
Class 7 - Single unit, 4 axles
Class 8 - Double unit, < 5 axles
Class 9 - Double unit, 5 axles
Class 10 - Double unit, > 5 axles
Class 11 - Multi unit, 5 axles
Class 12 - Multi unit, 6 axles
Class 13 - Multi unit, > 6 axles
Class 14 - Unclassifiable

1st First 15 minute interval
2nd Second 15 minute interval
3rd Third 15 minute interval
4th Fourth 15 minute interval
T Hourly Total



Eastbound

Hour	Class 1					Class 2					Class 3					Class 4				
	1st	2nd	3rd	4th	T	1st	2nd	3rd	4th	T	1st	2nd	3rd	4th	T	1st	2nd	3rd	4th	T
12:00 AM - 1:00 AM	0	0	0	1	**1**	11	10	6	6	**33**	1	1	2	2	**6**	0	0	0	0	**0**
1:00 AM - 2:00 AM	0	0	0	0	**0**	6	4	10	4	**24**	1	0	0	0	**1**	0	0	0	0	**0**
2:00 AM-3:00 AM	0	0	0	0	**0**	4	5	0	4	**13**	1	1	0	0	**2**	0	0	0	0	**0**
3:00 AM - 4:00 AM	0	0	0	0	**0**	2	0	4	1	**7**	1	0	0	1	**2**	0	0	0	0	**0**
4:00 AM - 5:00 AM	0	0	0	0	**0**	5	4	11	10	**30**	2	0	1	1	**4**	1	0	0	0	**1**
5:00 AM - 6:00 AM	0	0	0	0	**0**	8	13	13	19	**53**	2	1	2	7	**12**	0	0	0	0	**0**
6:00 AM - 7:00 AM	0	0	0	0	**0**	17	19	28	34	**98**	5	8	11	7	**31**	0	1	0	0	**1**
7:00 AM - 8:00 AM	3	0	0	2	**5**	47	86	142	138	**413**	4	19	23	27	**73**	1	1	1	0	**3**
8:00 AM - 9:00 AM	3	1	0	4	**8**	93	78	65	51	**287**	18	18	15	14	**65**	0	0	0	1	**1**
9:00 AM - 10:00 AM	0	2	2	0	**4**	49	59	61	66	**235**	12	18	10	17	**57**	0	0	0	0	**0**
10:00 AM - 11:00 AM	0	0	0	0	**0**	68	65	67	70	**270**	9	19	21	21	**70**	0	0	0	0	**0**
11:00 AM - 12:00 PM	0	2	0	0	**2**	75	72	96	103	**346**	19	19	10	26	**74**	0	0	0	0	**0**
12:00 PM - 1:00 PM	5	0	0	0	**5**	96	78	85	92	**351**	24	23	13	20	**80**	0	0	0	0	**0**
1:00 PM - 2:00 PM	1	0	0	1	**2**	76	106	93	84	**359**	12	13	22	16	**63**	0	0	0	1	**1**
2:00 PM - 3:00 PM	0	2	3	2	**7**	77	113	128	120	**438**	17	21	36	26	**100**	0	0	0	0	**0**
3:00 PM - 4:00 PM	2	0	0	2	**4**	126	122	116	124	**488**	34	34	23	26	**117**	1	1	0	0	**2**
4:00 PM - 5:00 PM	4	3	1	4	**12**	104	116	130	108	**458**	22	23	30	23	**98**	0	1	0	0	**1**
5:00 PM - 6:00 PM	2	4	1	2	**9**	163	146	109	111	**529**	29	21	16	20	**86**	0	0	0	2	**2**
6:00 PM - 7:00 PM	1	3	0	2	**6**	94	86	91	104	**375**	15	23	17	18	**73**	0	0	0	0	**0**
7:00 PM - 8:00 PM	0	0	0	1	**1**	83	71	66	76	**296**	11	12	13	12	**48**	0	0	0	0	**0**
8:00 PM - 9:00 PM	0	0	0	0	**0**	49	50	48	56	**203**	15	8	7	9	**39**	0	0	0	0	**0**
9:00 PM - 10:00 PM	0	0	0	0	**0**	42	36	41	24	**143**	11	8	4	7	**30**	0	0	0	0	**0**
10:00 PM - 11:00 PM	0	0	0	0	**0**	25	22	24	24	**95**	4	2	3	2	**11**	0	0	0	0	**0**
11:00 PM - 12:00 AM	0	0	0	0	**0**	16	25	11	7	**59**	3	1	0	3	**7**	0	0	0	0	**0**
Total	**66**					**5603**					**1149**					**12**				
Percentage	**0.9%**					**77.8%**					**16.0%**					**0.2%**				

Hour	Class 5					Class 6					Class 7					Class 8					Class 9				
	1st	2nd	3rd	4th	T	1st	2nd	3rd	4th	T	1st	2nd	3rd	4th	T	1st	2nd	3rd	4th	T	1st	2nd	3rd	4th	T
12:00 AM - 1:00 AM	0	1	0	0	**1**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**
1:00 AM - 2:00 AM	0	1	0	0	**1**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**
2:00 AM-3:00 AM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**
3:00 AM - 4:00 AM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**
4:00 AM - 5:00 AM	0	0	0	1	**1**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**
5:00 AM - 6:00 AM	0	0	3	0	**3**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**
6:00 AM - 7:00 AM	2	0	1	6	**9**	0	0	0	1	**1**	0	0	0	0	**0**	0	0	1	0	**1**	0	0	0	1	**1**
7:00 AM - 8:00 AM	1	5	2	5	**13**	0	0	1	5	**6**	1	0	0	0	**1**	0	0	0	0	**0**	0	0	0	2	**2**
8:00 AM - 9:00 AM	3	4	3	5	**15**	1	3	1	0	**5**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**
9:00 AM - 10:00 AM	1	6	2	2	**11**	0	0	2	2	**4**	0	0	1	0	**1**	0	0	0	1	**1**	0	0	0	0	**0**
10:00 AM - 11:00 AM	2	4	6	6	**18**	3	0	0	3	**6**	0	1	0	0	**1**	0	0	0	0	**0**	1	0	0	0	**1**
11:00 AM - 12:00 PM	8	5	5	3	**21**	0	4	0	1	**5**	0	0	0	0	**0**	0	0	0	0	**0**	0	1	0	0	**1**
12:00 PM - 1:00 PM	5	4	3	4	**16**	1	0	2	0	**3**	0	1	0	0	**1**	0	0	0	0	**0**	1	0	0	0	**1**
1:00 PM - 2:00 PM	4	6	3	5	**18**	2	2	2	1	**7**	1	0	0	0	**1**	0	0	0	0	**0**	0	0	1	0	**1**
2:00 PM - 3:00 PM	5	8	7	7	**27**	2	2	1	4	**9**	0	0	0	1	**1**	0	1	0	0	**1**	0	1	0	0	**1**
3:00 PM - 4:00 PM	6	8	4	4	**22**	4	3	3	2	**12**	0	0	0	1	**1**	0	0	0	1	**1**	0	0	1	0	**1**
4:00 PM - 5:00 PM	3	5	3	7	**18**	1	4	1	1	**7**	0	1	0	0	**1**	0	1	0	1	**2**	1	0	0	0	**1**
5:00 PM - 6:00 PM	8	4	1	3	**16**	2	4	1	0	**7**	0	0	0	1	**1**	0	0	1	1	**2**	0	0	0	0	**0**
6:00 PM - 7:00 PM	5	6	2	4	**17**	2	0	0	3	**5**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**
7:00 PM - 8:00 PM	4	2	4	1	**11**	0	2	0	0	**2**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**
8:00 PM - 9:00 PM	1	0	0	2	**3**	0	0	0	1	**1**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**
9:00 PM - 10:00 PM	0	1	0	0	**1**	1	0	0	0	**1**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**
10:00 PM - 11:00 PM	0	0	0	0	**0**	0	0	0	1	**1**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**
11:00 PM - 12:00 AM	1	1	0	1	**3**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	1	**1**
Total	**245**					**82**					**9**					**8**					**11**				
Percentage	**3.4%**					**1.1%**					**0.1%**					**0.1%**					**0.2%**				

Hour	Class 10					Class 11					Class 12					Class 13					Class 14					Total
	1st	2nd	3rd	4th	T	1st	2nd	3rd	4th	T	1st	2nd	3rd	4th	T	1st	2nd	3rd	4th	T	1st	2nd	3rd	4th	T	
12:00 AM - 1:00 AM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	**41**
1:00 AM - 2:00 AM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	**26**
2:00 AM-3:00 AM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	**15**
3:00 AM - 4:00 AM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	**9**
4:00 AM - 5:00 AM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	**36**
5:00 AM - 6:00 AM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	**68**
6:00 AM - 7:00 AM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	**142**
7:00 AM - 8:00 AM	0	0	0	0	**0**	0	1	0	0	**1**	0	0	1	0	**1**	0	0	0	1	**1**	0	0	0	0	**0**	**519**
8:00 AM - 9:00 AM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	**381**
9:00 AM - 10:00 AM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	1	0	**1**	0	0	0	0	**0**	**314**
10:00 AM - 11:00 AM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	**366**
11:00 AM - 12:00 PM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	**449**
12:00 PM - 1:00 PM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	**457**
1:00 PM - 2:00 PM	0	0	0	0	**0**	0	0	0	0	**0**	0	1	0	0	**1**	0	0	0	0	**0**	0	0	0	0	**0**	**453**
2:00 PM - 3:00 PM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	1	0	0	**1**	0	0	0	0	**0**	**585**
3:00 PM - 4:00 PM	0	1	0	0	**1**	0	0	0	1	**1**	0	0	0	1	**1**	0	1	1	0	**2**	0	0	0	0	**0**	**653**
4:00 PM - 5:00 PM	0	0	0	1	**1**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	**599**
5:00 PM - 6:00 PM	0	0	1	0	**1**	0	0	0	0	**0**	0	1	0	1	**2**	0	0	0	1	**1**	0	0	0	0	**0**	**656**
6:00 PM - 7:00 PM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	1	0	**1**	0	0	0	0	**0**	0	0	0	0	**0**	**477**
7:00 PM - 8:00 PM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	**358**
8:00 PM - 9:00 PM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	**246**
9:00 PM - 10:00 PM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	**175**
10:00 PM - 11:00 PM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	**107**
11:00 PM - 12:00 AM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	**70**
Total	**3**					**2**					**6**					**6**					**0**					**7202**
Percentage	**0.0%**					**0.0%**					**0.1%**					**0.1%**					**0.0%**					**100.0%**

7:15am-8:15am AM PK 580 AM PHF 0.81 4:30pm-5:30pm PM PK 694 PM PHF 0.85 HV Percent 5.3%

Westbound

Hour	Class 1					Class 2					Class 3					Class 4				
	1st	2nd	3rd	4th	T	1st	2nd	3rd	4th	T	1st	2nd	3rd	4th	T	1st	2nd	3rd	4th	T
12:00 AM - 1:00 AM	0	0	0	0	**0**	7	5	7	3	**22**	2	0	0	0	**2**	0	0	0	0	**0**
1:00 AM - 2:00 AM	0	0	0	0	**0**	7	2	5	4	**18**	0	0	0	1	**1**	0	0	0	0	**0**
2:00 AM-3:00 AM	0	0	0	0	**0**	4	6	0	2	**12**	0	0	1	0	**1**	0	0	0	0	**0**
3:00 AM - 4:00 AM	0	0	0	0	**0**	3	1	2	4	**10**	1	0	0	1	**2**	0	0	0	0	**0**
4:00 AM - 5:00 AM	0	0	0	0	**0**	2	6	10	12	**30**	0	2	0	0	**2**	0	0	0	0	**0**
5:00 AM - 6:00 AM	0	0	0	0	**0**	14	16	28	28	**86**	2	0	3	5	**10**	0	0	0	1	**1**
6:00 AM - 7:00 AM	0	1	1	0	**2**	27	33	50	54	**164**	5	8	8	9	**30**	2	0	0	0	**2**
7:00 AM - 8:00 AM	0	0	0	4	**4**	48	82	144	196	**470**	7	6	18	23	**54**	0	2	0	1	**3**
8:00 AM - 9:00 AM	2	0	0	0	**2**	105	61	67	75	**308**	17	7	11	10	**45**	0	0	0	0	**0**
9:00 AM - 10:00 AM	1	0	2	0	**3**	61	57	76	68	**262**	13	8	9	4	**34**	1	0	0	0	**1**
10:00 AM - 11:00 AM	0	0	3	0	**3**	54	67	74	82	**277**	9	15	12	11	**47**	0	0	0	0	**0**
11:00 AM - 12:00 PM	0	1	0	0	**1**	78	86	75	98	**337**	18	15	10	21	**64**	1	0	0	1	**2**
12:00 PM - 1:00 PM	0	0	2	2	**4**	129	96	82	88	**395**	13	18	18	14	**63**	0	1	0	0	**1**
1:00 PM - 2:00 PM	2	1	0	0	**3**	85	94	75	91	**345**	6	12	9	17	**44**	0	0	0	0	**0**
2:00 PM - 3:00 PM	0	0	1	0	**1**	92	111	95	120	**418**	13	18	16	10	**57**	1	0	1	1	**3**
3:00 PM - 4:00 PM	0	0	0	1	**1**	147	125	98	99	**469**	14	13	19	9	**55**	0	1	0	0	**1**
4:00 PM - 5:00 PM	2	2	1	2	**7**	117	115	122	121	**475**	14	12	16	14	**56**	0	0	0	0	**0**
5:00 PM - 6:00 PM	0	1	1	0	**2**	145	157	117	102	**521**	13	13	21	9	**56**	0	0	0	0	**0**
6:00 PM - 7:00 PM	0	0	1	0	**1**	117	83	79	80	**359**	16	14	13	10	**53**	0	0	0	0	**0**
7:00 PM - 8:00 PM	0	0	0	0	**0**	79	94	77	72	**322**	11	3	15	3	**32**	0	0	0	0	**0**
8:00 PM - 9:00 PM	0	0	0	0	**0**	54	47	62	59	**222**	8	7	6	3	**24**	0	0	0	0	**0**
9:00 PM - 10:00 PM	0	0	0	0	**0**	41	42	29	36	**148**	9	2	2	1	**14**	0	0	0	0	**0**
10:00 PM - 11:00 PM	0	0	0	0	**0**	25	26	12	21	**84**	2	2	0	0	**4**	0	1	0	0	**1**
11:00 PM - 12:00 AM	0	0	0	0	**0**	20	15	17	8	**60**	1	2	2	2	**7**	0	0	0	0	**0**
Total	**34**					**5814**					**757**					**15**				
Percentage	**0.5%**					**83.5%**					**10.9%**					**0.2%**				

Hour	Class 5					Class 6					Class 7					Class 8					Class 9				
	1st	2nd	3rd	4th	T	1st	2nd	3rd	4th	T	1st	2nd	3rd	4th	T	1st	2nd	3rd	4th	T	1st	2nd	3rd	4th	T
12:00 AM - 1:00 AM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**
1:00 AM - 2:00 AM	0	0	1	0	**1**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	1	0	0	**1**
2:00 AM-3:00 AM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**
3:00 AM - 4:00 AM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	1	0	0	**1**
4:00 AM - 5:00 AM	0	0	0	2	**2**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	1	0	**1**
5:00 AM - 6:00 AM	1	0	2	3	**6**	0	0	1	0	**1**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**
6:00 AM - 7:00 AM	1	1	1	3	**6**	0	0	0	0	**0**	0	0	1	0	**1**	0	0	0	0	**0**	0	0	0	0	**0**
7:00 AM - 8:00 AM	6	3	5	4	**18**	1	1	1	4	**7**	0	0	0	0	**0**	0	1	0	0	**1**	0	0	0	0	**0**
8:00 AM - 9:00 AM	5	2	4	2	**13**	1	4	0	1	**6**	1	0	0	0	**1**	0	1	0	0	**1**	0	0	0	1	**1**
9:00 AM - 10:00 AM	3	3	2	6	**14**	0	2	2	0	**4**	0	0	0	0	**0**	0	0	1	0	**1**	0	0	0	0	**0**
10:00 AM - 11:00 AM	2	5	4	5	**16**	0	2	0	1	**3**	0	0	0	0	**0**	0	0	1	0	**1**	0	0	1	2	**3**
11:00 AM - 12:00 PM	5	4	2	3	**14**	0	3	0	0	**3**	0	0	1	0	**1**	0	0	0	0	**0**	0	0	0	0	**0**
12:00 PM - 1:00 PM	5	5	2	2	**14**	2	1	0	1	**4**	1	0	0	0	**1**	0	0	0	0	**0**	0	1	0	0	**1**
1:00 PM - 2:00 PM	3	3	2	5	**13**	1	2	2	2	**7**	0	0	0	0	**0**	2	0	0	0	**2**	0	0	1	0	**1**
2:00 PM - 3:00 PM	5	6	7	2	**20**	1	1	0	1	**3**	0	0	0	1	**1**	0	0	0	2	**2**	0	1	0	0	**1**
3:00 PM - 4:00 PM	6	11	4	5	**26**	1	2	1	2	**6**	0	1	0	0	**1**	0	0	0	0	**0**	0	0	0	0	**0**
4:00 PM - 5:00 PM	6	2	4	3	**15**	1	2	2	3	**8**	0	0	0	2	**2**	0	0	0	2	**2**	0	0	0	1	**1**
5:00 PM - 6:00 PM	9	6	5	2	**22**	1	2	2	2	**7**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**
6:00 PM - 7:00 PM	4	2	3	3	**12**	1	1	1	1	**4**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**
7:00 PM - 8:00 PM	6	4	2	3	**15**	0	0	0	3	**3**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**
8:00 PM - 9:00 PM	3	3	1	1	**8**	0	1	1	1	**3**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**
9:00 PM - 10:00 PM	2	2	0	0	**4**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**
10:00 PM - 11:00 PM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**
11:00 PM - 12:00 AM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**
Total	**239**					**69**					**8**					**10**					**11**				
Percentage	**3.4%**					**1.0%**					**0.1%**					**0.1%**					**0.2%**				

Hour	Class 10					Class 11					Class 12					Class 13					Class 14					Total
	1st	2nd	3rd	4th	T	1st	2nd	3rd	4th	T	1st	2nd	3rd	4th	T	1st	2nd	3rd	4th	T	1st	2nd	3rd	4th	T	
12:00 AM - 1:00 AM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	**24**
1:00 AM - 2:00 AM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	**21**
2:00 AM-3:00 AM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	**13**
3:00 AM - 4:00 AM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	**13**
4:00 AM - 5:00 AM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	**35**
5:00 AM - 6:00 AM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	**104**
6:00 AM - 7:00 AM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	**205**
7:00 AM - 8:00 AM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	**557**
8:00 AM - 9:00 AM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	1	**1**	0	0	0	0	**0**	**378**
9:00 AM - 10:00 AM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	**319**
10:00 AM - 11:00 AM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	**350**
11:00 AM - 12:00 PM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	**422**
12:00 PM - 1:00 PM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	**483**
1:00 PM - 2:00 PM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	**415**
2:00 PM - 3:00 PM	1	0	0	0	**1**	0	0	1	0	**1**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	**508**
3:00 PM - 4:00 PM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	1	0	0	0	**1**	0	0	0	0	**0**	**560**
4:00 PM - 5:00 PM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	**566**
5:00 PM - 6:00 PM	0	0	1	0	**1**	1	0	0	0	**1**	0	1	0	0	**1**	0	0	0	0	**0**	0	0	0	0	**0**	**611**
6:00 PM - 7:00 PM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	**429**
7:00 PM - 8:00 PM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	**372**
8:00 PM - 9:00 PM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	**257**
9:00 PM - 10:00 PM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	**166**
10:00 PM - 11:00 PM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	**89**
11:00 PM - 12:00 AM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	**67**
Total	**2**					**2**					**1**					**2**					**0**					**6964**
Percentage	**0.0%**					**0.0%**					**0.0%**					**0.0%**					**0.0%**					**100.0%**

7:15am-8:15am AM PK 626 AM PHF 0.67 4:45pm-5:45pm PM PK 644 PM PHF 0.89 HV Percent 5.2%

Traffic Counts

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CITY OF HANFORD

(update counts every 3 years)

Street	Location	Station	2012 Traffic Count	2013 Traffic Count	2014 Traffic Count	2015 Traffic Count	2016 Traffic Count	2017 Traffic Count	2018 Traffic Count
Douty St.	south of Lang	**109**			2,766			2,828	
Elm St.	west of 11th	**65**						6,831	
Fargo Ave.	west of 12th	**155**		3,381			3,587		3,708
	east of 12th	**35**		7,868			8,977		9,249
	west of Fountain Plaza	**12**	9,459			10,502			10,451
	east of Aspen	**13**			9,314			9,961	
	east of Kensington	**14**		8,216			8,187		8,651
	west of Encore	**15**		4,732			4,661		4,972
	west of 9 1/4	**16**			2,743			3,068	
Fifth St.	east of Brown	**104**	765				977		
Fitzgerald Ln	south of Castoro	**163**	2,334				1,980		
	south of Bristol	**30**		3,713			3,204		
Flint Ave	west of 11th	**28**		1,968			3,138		
	west of Douty	**3**	3,770				4,568		
	west of Hwy 43	**11**		3,889			5,020		5,165
Florinda St.	west of Kaweah	**61**			4,922			5,282	
	east of Brown	**62**			4,768			5,115	
	west of Gladys	**63**	3,199				4,684		

Traffic Counts

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CITY OF HANFORD

(update counts every 3 years)

Street	Location	Station	2012 Traffic Count	2013 Traffic Count	2014 Traffic Count	2015 Traffic Count	2016 Traffic Count	2017 Traffic Count	2018 Traffic Count
Hume Ave.	west of Dawn	**131**	2,651				3,083		
	east of Santa Rosa	**147**	2,270				1,072		
Idaho Ave.	east of 11th	**143**	512				658		
Iona Ave.	east of 11th	**139**	723				1,041		
Irwin St.	north of Katherine	**52**	2,038			1,865			1,994
	north of Myrtle	**75**	3,789			3,249			3,274
	north of Seventh	**93**		2,886			2,885		
	south of Han/Arm	**129**		1,402			949		
Ivy St.	west of Kaweah	**67**		2,333			2,605		NEED
	east of Brown	**68**		1,843			1,853		NEED
Kings Co. Dr	south of Forum	**82**			3,370			3,373	
Lacey Blvd.	west of 13th	**98**			7,221			7,634	
	east of Magna Carta	**77**			12,246			11,535	
	west of 12th	**78**			13,105			11,772	
	east of Mall	**79**			15,829			15,648	
	west of Greenfield	**80**			16,211			17,448	
	west of Phillips	**81**			9,075			11,391	
	west of 9 1/2	**84**	4,753		7,003			6,982	

FLORIDA TABLE

TABLE 1

Generalized **Annual Average Daily** Volumes for Florida's **Urbanized Areas**

12/18/12

INTERRUPTED FLOW FACILITIES

STATE SIGNALIZED ARTERIALS

Class I (40 mph or higher posted speed limit)

Lanes	Median	B	C	D	E
2	Undivided	*	16,800	17,700	**
4	Divided	*	37,900	39,800	**
6	Divided	*	58,400	59,900	**
8	Divided	*	78,800	80,100	**

Class II (35 mph or slower posted speed limit)

Lanes	Median	B	C	D	E
2	Undivided	*	7,300	14,800	15,600
4	Divided	*	14,500	32,400	33,800
6	Divided	*	23,300	50,000	50,900
8	Divided	*	32,000	67,300	68,100

Non-State Signalized Roadway Adjustments

(Alter corresponding state volumes by the indicated percent.)

Non-State Signalized Roadways - 10%

Median & Turn Lane Adjustments

Lanes	Median	Exclusive Left Lanes	Exclusive Right Lanes	Adjustment Factors
2	Divided	Yes	No	+5%
2	Undivided	No	No	-20%
Multi	Undivided	Yes	No	-5%
Multi	Undivided	No	No	-25%
–	–	–	Yes	+ 5%

One-Way Facility Adjustment

Multiply the corresponding two-directional volumes in this table by 0.6

BICYCLE MODE[2]

(Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Paved Shoulder/Bicycle Lane Coverage	B	C	D	E
0-49%	*	2,900	7,600	19,700
50-84%	2,100	6,700	19,700	>19,700
85-100%	9,300	19,700	>19,700	**

PEDESTRIAN MODE[2]

(Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Sidewalk Coverage	B	C	D	E
0-49%	*	*	2,800	9,500
50-84%	*	1,600	8,700	15,800
85-100%	3,800	10,700	17,400	>19,700

BUS MODE (Scheduled Fixed Route)[3]

(Buses in peak hour in peak direction)

Sidewalk Coverage	B	C	D	E
0-84%	> 5	≥ 4	≥ 3	≥ 2
85-100%	> 4	≥ 3	≥ 2	≥ 1

UNINTERRUPTED FLOW FACILITIES

FREEWAYS

Core Urbanized

Lanes	B	C	D	E
4	47,400	64,000	77,900	84,600
6	69,900	95,200	116,600	130,600
8	92,500	126,400	154,300	176,600
10	115,100	159,700	194,500	222,700
12	162,400	216,700	256,600	268,900

Urbanized

Lanes	B	C	D	E
4	45,800	61,500	74,400	79,900
6	68,100	93,000	111,800	123,300
8	91,500	123,500	148,700	166,800
10	114,800	156,000	187,100	210,300

Freeway Adjustments

Auxiliary Lanes Present in Both Directions	Ramp Metering
+ 20,000	+ 5%

UNINTERRUPTED FLOW HIGHWAYS

Lanes	Median	B	C	D	E
2	Undivided	8,600	17,000	24,200	33,300
4	Divided	36,700	51,800	65,600	72,600
6	Divided	55,000	77,700	98,300	108,800

Uninterrupted Flow Highway Adjustments

Lanes	Median	Exclusive left lanes	Adjustment factors
2	Divided	Yes	+5%
Multi	Undivided	Yes	-5%
Multi	Undivided	No	-25%

[1]Values shown are presented as two-way annual average daily volumes for levels of service and are for the automobile/truck modes unless specifically stated. This table does not constitute a standard and should be used only for general planning applications. The computer models from which this table is derived should be used for more specific planning applications. The table and deriving computer models should not be used for corridor or intersection design, where more refined techniques exist. Calculations are based on planning applications of the Highway Capacity Manual and the Transit Capacity and Quality of Service Manual.

[2] Level of service for the bicycle and pedestrian modes in this table is based on number of motorized vehicles, not number of bicyclists or pedestrians using the facility.

[3] Buses per hour shown are only for the peak hour in the single direction of the higher traffic flow.

* Cannot be achieved using table input value defaults.

** Not applicable for that level of service letter grade. For the automobile mode, volumes greater than level of service D become F because intersection capacities have been reached. For the bicycle mode, the level of service letter grade (including F) is not achievable because there is no maximum vehicle volume threshold using table input value defaults.

Source:
Florida Department of Transportation
Systems Planning Office
www.dot.state.fl.us/planning/systems/sm/los/default.shtm